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DIESEL RAILWAY TRACTION

The June issue of this RAILWAY GAZETTE *publication, illustrating and describing developments in Diesel Railway Traction, is now ready, price 2s.*

Unrationed Petrol and Passenger Receipts

THE sudden abandonment of petrol rationing in Great Britain, announced by the Government on Friday last, came too late to have any marked effect on Whitsuntide railway passenger traffic. On the other hand, there can be little doubt that during the coming summer the increased freedom of the private motorist to travel in his own car is likely to have an adverse effect on both railway and other public passenger transport. Railway passenger receipts already are showing very serious declines. The last statement by the British Transport Commission, which covered the period to April 23, showed that compared with a year earlier the loss so far in 1950 was no less than £1,515,000, and this was a continuation of a very heavy decline which had already occurred last year as compared with 1948. It has already been made clear that the transport authorities are aware of the sensitiveness of railway passenger travel, and it is for this reason that no attempt was made to include railway fares in the recent advance in the level of freight charges. Notwithstanding the recent increase in the price of petrol, there can be no doubt that the private motorcar is a potent factor in the level of railway passenger business. Petrol rationing was instituted in September, 1939, and the relatively small mileage permitted to private car users must have had its influence on railway passenger receipts, especially for holiday and weekend travel. In the case of the motorcoach and road-haulage operators, although the former may also suffer some loss of patronage for the same reasons as the railways, it is not likely that they will derive much actual benefit from the relaxation of petrol rationing, for except at periods of particular stringency, they would appear to have received adequate supplies of fuel for all reasonable purposes.

Mr. H. E. Parkes

FOR nearly twenty years Mr. H. E. Parkes has taken an active and valuable part in questions affecting railway rates. He joined the Railway Rates Tribunal as a permanent member in 1931 and when, under the Transport Act of 1947, that body was reconstituted as the Transport Tribunal, he remained with it until May 3 last, when he retired. Mr. Parkes drew on a wide industrial experience in his work for the Tribunal and although he was not much given to comment or question in Court, he had a shrewd appraisal of the value of points made in argument and a very clear appreciation of the salient factors in some of the more abstruse matters which came before the Tribunal for decision. The questions he asked in Court were always very much to the point, and behind the scenes he brought to bear on the work of the Tribunal a useful facility with finance and statistics that was of value to his colleagues. Elsewhere in this issue we give some biographical details of Mr. Parkes, from which it will be seen that his interests have been by no means confined to transport charges affairs.

The Unions and Wages Restraint

THE General Council of the Trades Union Congress last week decided that continued wages restraint would impose an intolerable strain on the system of collective bargaining, and that its own wage-freezing policy was too rigid; it therefore asked its special economic committee to examine the effect on the national economy of claims by individual unions. Thus, the T.U.C., which is an advisory body whose decisions are not binding on affiliated unions, has yielded to pressure by dissatisfied unions, but has not committed itself to a course of action which would alienate public opinion and also those elements among trade unionists who are opposed to reductions in the pay differentials between skilled and unskilled operatives. But the case of the lower-paid worker, whose position has deteriorated with rising prices, is made no better and no clearer; nor is any light shed on the question of wage incentives to production. Meanwhile, the National Union of Railwaymen is again pressing its claim on behalf of its lower-paid members, on the ground presumably of the recent rail freight rate increases; and the Associated Society of Locomotive Engineers & Firemen has suddenly changed its policy and decided to claim wage increases, probably because it fears losing an opportunity of conserving the differentials between its own members, who are skilled men, and the lower-paid railwaymen who may gain by the latest move of the N.U.R.

Freight Handling in Britain and U.S.A.

A TEAM of transport and user's representatives left England on May 27 to visit the U.S.A. under the auspices of the Anglo-American Council on Productivity to examine terminal handling of commodities with particular reference to palletisation methods. The team will examine and report on practices and methods in the use of mechanical appliances, terminal layout, and design for conveyance and storage of commodities by U.S.A. railways, road transport, and docks and shipping organisations, and the study will include domestic and inter-transfer movements. Some of the principal railway centres are included in the itinerary. Also, the Great Lakes, Boston, and New Orleans will be visited to enable the team to

inspect various types of mechanical appliances, other than cranes, used on ships in connection with the loading and discharge of cargoes. Inspection of American road/rail containers, chiefly those capable of transfer between road and rail vehicles without the use of cranes, will be carried out, as well as an examination of incentive schemes introduced to expedite traffic handling. Further reference to the visit is made in our personal columns in this issue.

Materials Handling in Industry

A PRODUCTIVITY team, one of the series arranged by the Anglo-American Council on Productivity, visited U.S.A. last autumn under the leadership of Mr. Alfred Roebuck, of Hadfields Limited, to study the handling and disposal of materials; its report* has now been issued and is timely in view of the holding of the Mechanical Handling Exhibition in London from June 6 to 17. Emphasis is laid on the fact that mechanisation is only a part of the rationalisation of handling materials and that materials handling is largely a matter of planning and mental attitude: the team found in the U.S.A. a happy acceptance by trade unions of new methods. In the loading and unloading of railway vehicles, the report points out, the larger loading gauge of American railways facilitates mechanisation, and increases the need for it; the report does not enlarge on this subject, however, which in Britain has been studied by the railway and other industries for some time with encouraging results. The general recommendations include efforts by individual firms to study and plan rationalisation; contacts between British and American professional bodies; the inclusion of materials handling in university and technical college syllabuses; and a lead by managements and by labour unions.

Faster Train Services for G.N.R.(I.)

BEFORE the end of this year the Great Northern Railway (Ireland) will be in a position to provide a much improved standard of rail travel as regards speed and general amenities. This development will follow the delivery and placing in service of 20 diesel railcars which, though they can be worked singly, will be used in three-coach sets of two power cars and one intermediate coach. The order for these railcars was placed in England in the autumn of 1948, and the directors of the G.N.R. (I.) were thus able to anticipate one of the recommendations of the Milne Report published at the end of that year, which was that a more frequent and faster service with lighter trains was best suited to transport needs in Ireland. This month, the first two cars, with a trailer coach, will run between Dublin and Belfast, and later in the year, when further cars arrive, they will take the place of steam trains for some main- and branch-line services. When the change-over is fully effective the G.N.R. ideal of "shorter trains and more of them" will become a practical proposition. The cars, which are described elsewhere in this issue, were built by A.E.C. Limited and designed in conjunction with the G.N.R. (I.). They are generally similar to those built for the former G.W.R.

Scottish Region Summer Timetables

TWO new Anglo-Scottish services this summer are a 9.50 a.m., Saturdays only, Edinburgh Waverley to Sheffield, and 8.40 a.m. Dundee West to Manchester, with through coach from Aberdeen at 6.25 a.m. The 10.40 a.m. Glasgow Central to Manchester is re-routed *via* Kilmarnock, with connection from Ayr to Kilmarnock by a new train at 10.35 a.m. New trains include: 5.15 a.m. Saturdays only, Glasgow Queen Street to Mallaig with a balancing service at 8.15 a.m.; 4.40 p.m., Saturdays only, Fort William to Edinburgh, conveying sleeping cars for Kings Cross; 12.7 p.m., Saturdays only, Dundee Tay Bridge to Edinburgh and 2.30 p.m., Saturdays only, Edinburgh Waverley to Dundee; 5.40 p.m., Saturdays excepted, Perth to Aberdeen with through coaches from Manchester Victoria; and 7.30 p.m. Elgin to Aberdeen, with through coaches from Inverness. The 9.15 and 10.20 a.m. Aberdeen to Edinburgh Waverley will leave more conveniently, at 8.0 and 9.55 a.m. respectively. On the Highland, last summer's 5.25 a.m., Saturdays only, from Perth will leave at 5.15, due Inverness 9.3 a.m., an acceleration of 10 min. The 4.15 p.m. Inverness to Wick is speeded up by 12 min., and as a late alteration to the timetable the connecting services between Inverness and the Black Isle are improved. The through trains introduced last summer between Glasgow Queen Street and Oban *via* the West Highland Line and Crianlarich will operate during July and August only.

* Materials Handling in Industry. London: The Anglo-American Council on Productivity, 21, Tothill Street, S.W.1. Price 2s. 6d.

More Long-Distance Trains for North-West Suburbs

THIS year the policy of stopping certain long-distance trains at outer suburban stations was one of the features of the summer services selected for special mention in Sir Eustace Missenden's review (see our April 28 issue). It is welcome to see a greater uniformity in this practice between the various Regions, and to note the more general acknowledgment of the fact that a week-end service calling in one direction only, or even daily facilities that are unbalanced, hardly fulfil the present necessity of advertising railway services to the best advantage. Examples of such improvements are the stops at Watford Junction, London Midland Region, by up expresses from Liverpool and Manchester in the evening, to balance the morning down services to those places. The same policy has been extended, rather more surprisingly, to the restored early afternoon train from Manchester to Marylebone, which now will call at Harrow-on-the-Hill as well as Aylesbury. Two new Sunday trains on this line, one up and one down, also will serve Harrow, which therefore will enjoy two through Midlands services in each direction on weekdays, with three down and four up on Sundays. This is a considerable service by local standards for a station so near the terminus, but benefits a densely-populated area by reason of the frequent electric trains between Harrow, Uxbridge, Wembley, and Watford.

A Clue to Future Marylebone Services?

IN the new schedule of the afternoon train from Manchester to Marylebone mentioned in the previous note, some may see a pointer to the future of services on this much-discussed route. The pre-war 2.20 p.m. up corresponded to the 3.20 p.m. *ex*-Marylebone (better known, perhaps, than the up train, as the descendant of the "Sheffield Special"). On its first post-war reappearance the up afternoon service from Manchester was much slowed, but again ran non-stop from Leicester. In the new summer timetables the train approaches closer to the present reduced status of its 3.20 p.m. down partner, although still 20 min. faster throughout. It appears from this that G.C. section services are concentrating on point-to-point traffic rather than aiming to offer particularly attractive facilities to and from London. The revival of the afternoon up train coincides with the cancellation of the 11.30 a.m. from Manchester, and of the only timing from Manchester to Marylebone in under 5 hr. At one time it seemed that the "Master Cutler" and "South Yorkshireman" might portend a "levelling up" towards the old Great Central traditions, but these trains themselves have suffered a "levelling down" from which the summer timetables show no recovery, and the up "South Yorkshireman," for example, takes all but a minute of 5½ hours for the journey from Bradford to Marylebone, made by the unnamed pre-war 10 a.m. up in 4 hr. 55 min.

Complex Underbridge Building under Heavy Traffic

THE need for maintaining without interruption the flow of some of the heaviest high-speed traffic in North America resulted in unusually elaborate preliminary measures when a new underbridge was constructed recently on the Pennsylvania Railroad quadruple main line in New Jersey, described elsewhere in this issue. These included five months' piecemeal excavation into virgin soil for,

and the building of, a 240-ft. four-track temporary timber-trestle viaduct, actually underneath heavy passing traffic. Some excavation was carried out in a very confined space with as little as 20-in. headroom. Yet line-occupation dictated use of mechanical methods, and in this case small open-bottom scrapers were hauled to and fro by hoist and tackle. Several more months were required for the erection of the 167-ft. two-span permanent bridge superstructure in two halves, each to carry a pair of tracks, and the preliminary arrangements for slewing them transversely into the line. Finally, the dismantling of half the temporary viaduct and the slewing of half the superstructure to take its place had to be completed within about 12 hr., in two phases, each half on a different Sunday, when possession was obtained of one pair of tracks.

New British Locomotive Headlamp Codes

EARLY in the century a standard code of headlamps was agreed between a number of British railway companies, and came generally into use on main lines, with the lamps used to indicate the class or category of each train. Later, in the interests of economy, the code was revised so that not more than two lamps are required for any indication, other than that of a royal train, for which four headlamps are used, one on every lamp-iron. This national head code provided for 9 indications of type of train, and it is in general use in the Western Region, and (with exceptions) the London Midland, Scottish, Eastern, and North Eastern regions. A new passenger freight, etc., train classification is to be introduced on June 5, and the details are shown in the diagram on page 623. This classification provides for 10 headlamp codes for general use on British Railways. It will not apply on the Southern Region, nor on the lines of the London Transport Executive, and will not be used on any sections of line where headlight codes are in operation. Such headlight codes generally indicate the route a train is to take and not its class. There are more than 30 different route combinations in use in the Southern Region, where the lamps are also represented by day by circular white discs.

London Area Passenger Charges Scheme

NEXT week we hope to continue our summary of the proceedings before the Transport Tribunal in the matter of the draft London Area (Interim) Passenger Charges Scheme which the British Transport Commission is seeking authority to introduce on October 1 next. The scheme covers all the London Transport areas, the suburban services of British Railways in the area served by London Transport buses, and the London, Tilbury & Southend line. The intention is to apply both to London Transport and British Railways a new standard scale based generally on a rate of 1·25d. a mile, and the net effect of the fare alterations was estimated originally to increase gross transport receipts in the London area from £74½ million to £77½ million in a full year. The inquiry was adjourned on May 22 and the hearing was resumed in London on Thursday in this week.

Since the inquiry opened on May 9, several important facts have come to light, and there have been a number of developments such as an increase in the price of coal and the higher duties on petrol and oil which are bound to have their effect on railway finances as a whole. For example, against the estimated £3 million increase in revenue for London Transport must be set £1,125,000 for increased operating costs resulting from the revised petrol duties, while the higher prices for coal, resulting from the recent increase in railway freight charges, will impose a further burden on the railways as well as on industry in general.

Figures were submitted showing that the gross receipts of British Railways fell from £344·8 million in 1948 to £334·1 million in 1949. The estimated gross receipts for the current year, however, largely because of the increased freight charges, are £345 million. The expected deficit on the B.T.C. revenue account for 1951 is £1·4 million, whereas the estimated deficit for 1950 has been worked out at £15·1 million, and the accumulated deficit for 1948, 1949, and 1950 at £40 million.

Mr. R. H. Wilson, Comptroller, British Transport Commission, when asked if London Transport is paying its way, showed that the cost of carrying the public on services in the London area was greater by £3·5 million than the amount which the public now paid. Net traffic receipts of London Transport rail and road services in 1948 were £5,863,000 as compared with estimated amounts of £3,711,000 in 1949 and £2,367,000 in 1950. For 1951, the amount has been calculated at £1·7 million only, largely because of the increased petrol tax. For 1951, also, total revenue requirements from passenger operations in the London area work out at £82·6 million, and the gross receipts for 1951 at prevailing charges at £76·6 million. The new scheme if approved would produce a further £3·9 million to give a total of £80·5 million.

Mr. A. B. B. Valentine, Member of the London Transport Executive, dealt very clearly in his evidence with the need for reform in fares, and for the urgent necessity for removing the many fare anomalies now existing in the London area. In this connection the most glaring example is the wide difference of fares for early morning travel due to workmen's fares on trams and trolleybuses and the absence of them on buses. One reason why the Commission is anxious to have the new scheme approved by October 1 is that trams in South London are due to be abandoned on that date. Also the uneconomic level of workmen's fares places a burden on other charges, and such fares, ending at approximately 8 a.m., create an artificial peak by attracting traffic which should travel slightly later in the day.

Unification and Technical Development

ONE of the primary objectives of the unification under national ownership of British Railways was to secure whatever economies could be achieved by standardisation of equipment and operation. One result of the progress which has been made in this direction has been the elimination of competitive practices and developments between the various principal departments of the railways which were a feature of the days of private enterprise. The competitive energies which, in the days of separate railway undertakings, were devoted to producing an improved machine or a better way of achieving a similar objective, sometimes were criticised as wasteful by those who believed that the best results could be achieved by unity of effort, but nevertheless the commercial rivalry between the railway companies often resulted in worthwhile technical development.

Before the first major grouping of railways in 1923, when there were 123 railways, many of which were in acute competition for business, the chief officers of each line were constantly endeavouring to evolve means whereby the practical and financial outcome of operating their system could be improved. As a result, developments of all kinds, whether technical, in the sense of mechanical, civil or signalling engineering, or commercial or operating processes, were constantly being evolved and recorded.

The grouping of railways under the Railways Act of 1921 naturally brought some diminution in the number of railway developments to be recorded, for in effect progress was concentrated along four broad main avenues, instead of the many smaller paths in being before and for a while after the first world war.

With the coming of State railways in Great Britain on January 1, 1948, a still further concentration of research and development resources occurred. Because of the strong tendency towards standardisation in all aspects of British Railways work at the present time, developments necessarily are announced relatively seldom, for before adoption they have to be reduced to a common denominator, applicable to all six Regions of British Railways. This does not necessarily mean, as some are inclined to argue, that progress and development have ceased. It does mean that a number of expedients which under a more broadly based system might have been

tried out and subsequently either adopted or abandoned, never see the light of day. That is inevitable, when the final sieve through which all ideas, projects, and so forth, which have safely negotiated the various committees which intercept them on the way, is in effect one functional Member of an Executive or even the Executive as a whole, which inevitably on technical matters will tend to accept the view and recommendation of the functional Member.

This is not necessarily a criticism of the present system, although there may be good grounds for the belief that in seeking the best for all Regions a level may have to be adopted which might be capable of betterment in some cases. A general average of efficiency in any respect necessarily implies something between the best which might be achieved and something much less good. On the other hand, the achievement of economy through standardisation in the long run may be accounted a sufficient justification. In many spheres, not only those connected with railways, the attainment of development and improvement often involves considerable expenditure, much of which, taken by itself, in retrospect can be seen to be wasteful.

Under the existing organisation of British Railways there does not seem to be any logical course which could be pursued other than that which is being adopted. Given that standardisation in many forms is desirable in railway economy, there cannot be the scope in the future for the individual enterprise or for the varying lines of development which marked the earlier days of the railways of this country. Standardisation does not mean stagnation, but it does imply a concentration of effort and resources along comparatively narrow paths.

New South Wales Government Railways

THE New South Wales Commissioner for Railways, Mr. F. C. Garside, who succeeded Mr. T. J. Hartigan on his retirement on October 1, 1948, has presented to the Minister for Transport his report on the operations of the Department of Railways for the year ended June 30, 1949. Earnings totalled £39,663,461, and exceeded working expenses by £3,924,628 When the Government contribution of £800,000 was added to this profit on operations there was a shortage of £1,915,785 for meeting statutory charges.

Throughout the year activities were severely handicapped by inadequate coal. Drastic reductions were made in passenger and freight-train services, with consequent losses in earnings, which, nevertheless, exceeded those for the previous year by £2,757,599. Working expenses were £35,738,833 and represented an increase of £4,724,166 on the total for the previous year. Mr. Garside points out that this increase was caused by alterations in the basic wage and also in award conditions and by higher material costs. Increases in working expenses beyond the control of the Department have totalled £16,548,000 since 1937-38. They include basic wage and awards, £9,097,000; materials, including coal, £3,443,000; and the 40-hr. week, £2,500,000.

Despite restrictions on passenger services due to coal shortages, a record number of 263,116,462 passenger-journeys was made, an increase of 69,647. Goods traffic hauled totalled 16,903,712 tons and showed a decrease of 503,977 tons on 1947-48. Locomotive-mileage totalled 43,952,127, an increase of 298,626 miles, while gross ton-mileage (passenger and goods) increased from 12,663,105,932 to 12,806,899,026.

Below are given some of the principal statistics:—

	1947-48	1948-49
Total miles open for traffic	6,128	6,112
Earnings	£36,906,000	£39,663,000
Working expenses	£31,015,000	£35,739,000
Balance	£5,891,000	£3,925,000
Percentage of profit to capital invested	£3 12s. 1d.	£2 6s. 5d.
Percentage of working expenses to earnings ...	84	90
Earnings per average mile open	£6,022	£6,479
Working expenses per average mile open	£5,061	£5,838
Return per average mile open	£961	£641
Passenger-journeys	263,047,000	263,116,000
Goods tonnage	17,407,000	16,904,000

During the year an air-conditioned seven-car steam train and three two-car diesel rail motor trains were placed in service. The air-conditioned train was similar to the "Newcastle Express" the previous year and it was also run as a fast Newcastle service, with three return trips between Sydney and Newcastle, Mondays to Fridays, and two trips each way on Saturdays. The three diesel units began operating on country branch lines. Difficulties experienced in obtaining railway equipment and supplies in Australia led to the placing of large orders overseas for rolling stock and rails. The former included 25 Beyer-Garratt locomotives from Beyer, Peacock & Co., Ltd., for delivery in 1952; ten sets of diesel-electric equipment from The English Electric Co. Ltd.; 300 bogie louvred vans from the Birmingham Railway Carriage & Wagon Co., Ltd.; and 200 bogie brakevans from the Metropolitan Cammell Carriage & Wagon Co., Ltd. The Beyer-Garratt engines would be more powerful than the existing class "D57" goods locomotives, and help to tide over the interval before electrification.

Large works in hand included quadrupling between Lidcombe and Penrith and between Strathfield and Hornsby; construction of the Circular Quay section of the City Railway in Sydney; preliminary work on the eastern, south eastern, and southern suburbs railways, and the building of the Sandy Hollow to Mary Vale railway.

Problems arising from increased production in industrialised New South Wales in the working of heavy traffic over a number of almost completely saturated main lines were already under examination when the Joint Coal Board outlined its plan for a 50 per cent. increase in coal production within four years. Movement of the increased tonnage would have surpassed existing rail capacity. After exhaustive inquiry, a report was drawn up by the Department recommending electrification in the following order of certain main-line sections:—(1) Sydney to Lithgow, together with Sydney Central Station and Yard, with lines and yards in the Metropolitan Area, 350; (2) Sydney to Newcastle, 200; (3) Sydney to Port Kembla, 100; and (4) Sydney to Goulburn, 260 single-track miles; total, 910 single-track miles.

The Government was approached in March, 1949, and asked to sanction the proposals without delay. Within a few days the Premier of the State announced that the plan had been approved; by the end of the year under review the preliminary steps had been taken to implement the programme.

Many additions and improvements were made to plant and equipment. On June 30, 1949, the total capital invested in the assets was £173,100,320. The value of stores purchased, at £14,046,156, was the highest ever. Of this, £3,814,593 was spent on coal, £1,185,543 on iron and steel products, £784,112 on timber, £710,032 on electrical equipment and supplies, and £606,679 on fuel oil. Over the twelve months the staff employed averaged 59,312.

Pakistan Railways

CONSEQUENT on the partition of British India on August 14, 1947, into two Dominions—the Indian Union and Pakistan—two of its railway systems, the North Western and the Bengal Assam Railways, also had to be partitioned. More than two-thirds of the N.W.R. with its headquarters at Lahore remained in Pakistan and retained the old name. The portion of the B.A. Railway which lay in East Pakistan and covered 1,622 miles out of the total B.A.R. route mileage of 3,554, was given the new name of Eastern Bengal Railway, with headquarters situated at Chittagong.

The task of partitioning the two railways was performed by numerous committees and sub-committees composed of Muslim and non-Muslim members. The committees set up by the Railway Board at New Delhi framed the policies, and those set up by the N.W. and B.A. Railways worked out the details. The recommendations of all the committees and sub-committees had to be accepted by the Partition Council which also decided those cases in which the Muslim and non-Muslim members of a railway committee had not come to an agreement.

As Pakistan was to have only two railway systems—the

North Western and the Eastern Bengal—it was decided to create, for their administration at the centre, a Railway Division under a Director-General in the Ministry of Communications, instead of setting up a more elaborate organisation like the Railway Board of India. The Railway Division is at present composed of a Director-General, two Directors (Director, Establishment and Director, Mechanical Engineering & Stores), one Joint Director (Traffic), three Deputy Directors (Administration, Civil Engineering and Stores), and one Assistant Director (Establishment). The Financial Adviser to the Ministry of Communications acts as an adviser to the Railway Division on financial matters.

The Railway Division, along with the other Ministries of the Government of Pakistan, has its headquarters at Karachi. Some of the major problems which have been engaging the attention of the Railway Division are the rehabilitation of the war-worn E.B. and N.W. Railways, their re-organisation to enable them to meet the changed needs of the present day, their general development and the development of the Port of Chittagong and the obtaining of essential stores for these purposes. The events subsequent to the partition of India, the mass migration of the Muslim railwaymen from India to Pakistan, thus creating a large and uneconomic surplus, the drying-up of the normal sources of supply of essential stores hitherto mainly in India, and finally the stoppage of coal supply from India, have created problems and work of a magnitude which was never anticipated when the Railway Division was created two-and-a-half years ago.

The two railways, the North Western and Eastern Bengal, have each a General Manager who is responsible to the Railway Division. The geographical situation of these two railway systems, the N.W.R. lying in West Pakistan and the E.B.R. in the East, with India separating the two, does not enable the two railways to be placed under one management.

The North Western Railway, with a route mileage of 5,362, still has the distinction of being the largest railway in the Indo-Pakistan sub-continent. It has three gauges—broad (5 ft. 6 in.), metre (3 ft. 3⅜ in.), and narrow (2 ft. 6 in.). The broad predominates, the narrow is found on its western frontiers, and the metre on the Sind Section. It runs from the Khyber Pass *via* the important towns of Peshawar, Rawalpindi, Lahore, and Multan, to Karachi and has a closely-woven network of railways in the fertile plains of the Punjab and Sind. Branching off at Rohri, it runs to Quetta and onward to Chaman and Zahidan, the terminal stations for Afghanistan and Iran respectively. On its east it is linked with the Indian Railways at seven points, although no traffic has passed through some of these since Partition.

The North Western Railway works on a divisional system. The whole railway is divided into five divisions with headquarters at Rawalpindi, Lahore, Multan, Quetta, and Karachi. Each Division is under a Divisional Superintendent, who is directly responsible to the General Manager.

Under the Divisional Superintendent there are Civil, Mechanical and Signal Engineers, Transportation, Commercial and Establishment Officers of the Divisional and Sub-divisional status. These officers receive technical direction from their respective principal officers. The mechanical workshops located at Moghalpura (Lahore) and employing over 12,000 men, rank as a Division and are under the Superintendent, Mechanical Workshops, who has the same status as a Divisional Superintendent and is directly responsible to the General Manager. He receives technical guidance, however, from the Chief Mechanical Engineer.

At the North Western Railway headquarters at Lahore there are a General Manager, two Deputies to the General Manager, one of whom is in charge of establishment matters, and seven Principal Officers—the Chief Engineer, Chief Mechanical Engineer, Chief Operating Superintendent, Chief Commercial Manager, Chief Medical Officer, Controller of Stores and the Financial Adviser & Chief Accounts Officer. With the exception of the Chief Medical Officer all the principal officers are assisted by one or more Deputies.

The Eastern Bengal Railway, which serves East Pakistan, traverses mostly the delta regions of the rivers Ganges and Brahmaputra. The latter river, still unbridged, divides the E.B.R. into two zones, connected by a metre-gauge wagon ferry service between Bahadurabad and Tistamukh Ghat. Other railway termini at riverside points are connected by steamer services for both passengers and goods. The E.B.R. is connected with the Indian railways at nine points.

The route mileage of the E.B.R. is 1,622, made up of 500 miles of broad gauge, 1,102 miles of metre gauge, and 20 miles of narrow gauge. The importance of the railway is not its route mileage, but its intensity of traffic—the coaching and goods traffic, excluding cross traffic, for the year ended March 31, 1949, was 1,605 million passenger-miles and 493 million ton-miles respectively—and in the intricacy of its problems arising from the break of gauge and break of continuity at numerous points, and from competition with water transport which has been in the hands of private concerns over which the Government so far has exercised little control. The E.B.R. is now acquiring an interest in water transport also by purchasing a flotilla.

The organisation of the Eastern Bengal Railway is departmental. According to this organisation each regional or District Officer is directly responsible to the head of his Department at headquarters. There are four Civil Engineering Districts under the Chief Engineer and five Mechanical Engineering Districts (including the workshops at Saidpur, Dacca, and Pahartali) under the Chief Mechanical Engineer. The Traffic Manager is the combined head of the Transportation and Commercial Departments and has under him two Transportation and three Commercial Districts and a combined Transportation & Commercial District at Lalmanirhat.

The headquarters organisation which is situated at Chittagong consists of the General Manager, the Deputy General Manager, the Chief Engineer, Chief Mechanical Engineer, Traffic Manager, Financial Adviser & Chief Accounts Officer, Chief Medical Officer, Controller of Stores, Chief Electrical Engineer and Signal Engineer. The Chief Engineer, the C.M.E., the Traffic Manager and the Financial Adviser & Chief Accounts Officer are each assisted by one or more Deputies.

No account of the Eastern Bengal Railway is complete without a description of the part which the railway played in the development of the Chittagong Port. Chittagong, an ancient port of repute, was, before Partition, completely neglected so that there might be no rival to Calcutta, which had established itself as the centre of trade, commerce and industry for the whole of Bengal. The old Assam Bengal Railway, however, saw the potentialities of Chittagong as a port and developed it by building jetties, sheds and railway connections and managed its entire business, the Port Commissioners' jurisdiction being confined to the water.

After the Partition in 1947, Chittagong became the only port for East Pakistan, and the E.B.R., like its predecessor, continued to develop it. But for the railway's initiative in carrying out short-term improvements, this port would not have been able to handle even the essential seaborne traffic for East Pakistan. The result of the railway's efforts can be judged from a review of the statistics. Before and during the war (when peacetime working restrictions such as the Customs check were relaxed), the monthly average of the total tonnage handled at this port was 42,000 and 52,000 respectively, whereas in January, 1950, the import and export totalled 120,000 tons.

This capacity is, however, not equal to the present-day and future requirements, and a scheme for a large-scale expansion of the Chittagong Port has been sanctioned and the work just begun. The time has also come for this important port to have its own independent organisation and it is likely to be separated from the E.B.R.

In 1949 the Government appointed an Enquiry Committee to suggest measures for improving the efficiency of working and effecting economy on the railways. The Enquiry Committee has recently submitted its Report, which is under consideration by the Government.

LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

Sir Eustace Missenden's Offer

May 26

SIR,—I read the letter signed "Ex-General Manager" in *The Railway Gazette* dated May 26, in which amongst other matters he criticises the administration of British Railways. In view of the *nom-de-plume* he has used, I should very much like to meet him personally, to learn at first hand what his proposals are; and I need hardly say that if his suggestions are found to be sound, they will receive every consideration. I therefore extend to him an open invitation to meet me to discuss the matter further.

Yours faithfully,

E. J. MISSENDEN
Chairman,
The Railway Executive

222, Marylebone Road, London, N.W.1

200 Years of Printing

May 26

SIR,—Your interesting note on the bicentenary of the House of Harrison does less than justice to the long commercial relationship of *The Railway Gazette* and one of its predecessors with Harrison printing. Publications of Transport Limited (now the Tothill Press Limited) have been printed by Harrisons continuously since July, 1892, or for nearly 60 years, and I suggest that a commercial link of this duration is worthy of record in connection with the congratulations that are now being extended so widely to the House of Harrison & Sons.

Yours faithfully,

PRAXITELES

London, W.C.1

Summer Timetables

May 9

SIR,—Referring to your comments in the May 5 issue on the summer timetable of the London Midland Region, I think it is a poor production, and does not compare in lucidity and availability of information with pre-war issues.

The printing is far too small, and some of the notes in the tables are so small as to be almost unreadable. Also, is there any reason to make the timetable so complicated? In many cases the difference in times between the running of a train on Saturdays and on other weekdays is almost negligible, and surely one column could be used? This would mean if running times were adhered to, that except on Saturdays, the train would arrive early, and few, if any, passengers would object to this.

To take a concrete example, the 9.33 a.m. train from Bradford to Bristol. No variation in timing takes place until Cheltenham, when the Saturdays only train arrives there one minute later than on other weekdays. It leaves Gloucester two min. later and arrives at Bristol ten min. later. The departure time from Gloucester could be tabled the same for all the week, and the arrival time at Bristol could be given as the Saturday time, namely, 4.10 p.m. From Mondays to Fridays, I am sure, all passengers would be delighted to find they were arriving at Bristol early.

I could give many other instances where simplification in the tables could be made; and I defy anyone, unless thoroughly conversant with timetables, to understand the running of the "Pines Express."

I feel certain it is in the interests of the railways and the public that timetables should be as simple as possible; and that references to notes should be as few as possible. By adopting such ideas the Enquiry Offices would be far less used and the good name of the railways enhanced.

I give another instance of what I consider unnecessary complication. In the tables it states specifically on the night train from St. Pancras to Edinburgh "Sleeping Car to Edinburgh," and in the notes it reads "Does not convey sleeping car passengers London to Edinburgh." What is this sleeping car for? Only for passengers from intermediate stations? If so, why not state it clearly? A timetable should induce a traveller to travel by train, and not try to make him into an expert mathematician or crossword solver.

Yours faithfully,

HARRY F. DOWLER

Croyde, Four Oaks, Warwickshire

Dining Room Charges

May 12

SIR,—Mr. William Bottomley's letter in your issue of May 12 on commercial train services in the Bradford area puts clearly the unbusinesslike approach by the Railway Executive to many items of present-day railway operation. I cite a similar example by the Hotels Executive which has occurred this week in Leicester.

Leicester Central has a reputation for being a clean and smart station. This has been shared by the dining room which until this week put on a good three-course lunch for a price of 2s. 3d. plus 3d. surcharge. Free platform tickets are issued to non-travellers to encourage the use of the dining room by business people in Leicester. In the past two years I have been a fairly regular customer and it seemed that quite a good business had been built up without apparent inconvenience to the normal travelling public.

In the middle of last week the tariff was revised and a 3s. 6d. four-course lunch substituted. For a daily lunch bill for the average man in these hard times this price is too much, and on my last visit the room was nearly empty, the regulars having presumably taken themselves off to restaurants more prepared to cater for their needs.

Undoubtedly the Hotels Executive has adjusted the type of meal and price to a national standard now that the control on meal prices has been lifted. Surely it is a better business proposition to serve a 2s. 6d. three-course lunch to, say, 40 persons than a 3s. 6d. four-course lunch to about 10, and it would have been wiser to consider the local conditions even on a small matter of this nature than to base the price on a country-wide scale.

Yours faithfully,

R. E. TUSTIN

53, Cambridge Road, Cosby, Leicester

Railway Efficiency

May 4

SIR,—Readers of *The Railway Gazette* who do not see *Hansard* will have missed some significant features of the debate on increased railway rates on May 10, and I should like to invite attention to certain of them, more especially in their bearing on my letter which you published on April 28. The Minister of Transport made two points on the comparison with U.S.A.:—

(i) That the figure of 19,153 net ton miles per train engine hour was in short tons and that this would make a big difference;
(ii) That I had ignored the fact that the average length of haul in U.S.A. was 424 miles, and in U.K. 72 miles.

As to the first, I accepted Mr. Bell's figure, but if the U.K. result in 1948, 1,053 net ton-miles per train engine hour, were interpreted in terms of short tons it would become about 1,400. In comparison with 19,153, the difference cannot be described as big; negligible would be a more accurate description.

As to (ii), average length of haul has no bearing whatsoever on a statistical unit based on tons carried over distance in time. The only relevant factors in the unit are net load (payload), and number of engine miles worked in an hour; 424 miles at 8·17 miles a train engine hour with a load of 156·11 tons would give precisely the same result as 72 miles at the same speed with the same load.

Misunderstanding of essential statistics at such a high level raises the question: Who advises the Minister on

these technical questions? I have been led to ask more than once who advises railway management, for in the last talk I had with Lord Stamp he was similarly ill-informed, so was Frank Pick, and at a meeting of a transport committee, of which I was a member, Sir William Wood described as inaccurate my statement that the average wagon load of general merchandise in 1938 was 2·81 tons, whereas (he said) it was 2·99 tons. My figure was the throughout load, taken from page 24 of the Official Statistics for 1938, his the starting load from the previous page. The first figure was obviously the more accurate. Who are the advisers? And do railway people really understand their own figures?

It is easy to understand, if not to admire, the mentality of people who wish to put the best complexion on things for their superiors—the providers of the straws at which Ministers can clutch. I do not think it is real ignorance, but merely the blindness which causes people to see only that which they are required to see, when great issues—such as the dreadful conditions of the railways and the awful burden of transport cost on the community—are at stake, it is simply tragic that the facts are so distorted, and the overwhelming importance of a strong, independent, well-informed technical press which will examine the facts cannot be exaggerated.

Yours faithfully,

FREDERICK SMITH

65, Hallowell Road, Northwood

Commercial Train Services

May 20

SIR,—The claim made by Mr. Bottomley in your May 12 issue for an improved service for Bradford is justified, but the 4¼-hr. schedule of the pre-war "Yorkshireman" was from and to Bradford Exchange *via* Thornhill and Royston Junction, some 11¾ miles shorter than from Forster Square and avoiding reversal at Leeds. At present this route is not in regular use for passenger trains from and to the Midland Division. On the basis of the current timetable, if the 4.50 p.m. from St. Pancras conveyed a through portion for Bradford Exchange, detached at Sheffield, an arrival could no doubt be given about 10.15 p.m., 40 min. earlier than that at Forster Square.

Before September, 1937, the commercial service from Bradford to London by the Midland route was reasonably good. There were trains from Forster Square at 7.26 a.m., or Exchange at 7.23, combined at Sheffield and due St. Pancras at 12.8 p.m. The "Yorkshireman," at 9.10 a.m., ran up in 4 hr. 13 min. and the 9.40 a.m. from Forster Square in 4 hr. 29 min. Returning in the evening, there were the "Yorkshireman" at 4.55 p.m. from St. Pancras in 4 hr. 12 min. to Exchange, and the 6.15 p.m., 4½ hr. to Exchange, and a few minutes longer to Forster Square.

With the introduction of the accelerated services in September, 1937, the 7.23 a.m. from Exchange ran independently of the Forster Square train and was accelerated 18 min., to reach London at 11.50 a.m. The 9.40 a.m. from Forster Square was retimed to leave at 9.22 a.m., due St. Pancras 1.35 p.m., a gain of 16 min. The down "Yorkshireman" was altered to leave St. Pancras at 5.10 p.m., with a schedule of 4 hr. 1 min. to Exchange. A poor feature has always been the lack of a train from St. Pancras at a convenient hour to reach Bradford before about 2 p.m.

In the autumn of 1946 a marked improvement to the Midland services was made; the 4.50 p.m. from St. Pancras was due Bradford at 10.4 p.m. and the 6.20 at 11.24 p.m., the latter only 24 min. longer than the September, 1937, schedule, but with the fuel crisis of that winter cancellations and decelerations became necessary. Today the Midland route has many temporary speed restrictions, particularly in the Erewash Valley.

Mr. Bottomley suggests a through service to Keswick *via* Appleby. Within three or four years of the opening of the Settle and Carlisle in 1876, the North Eastern was running three trains daily in each direction, non-stop, between Penrith and Appleby (Midland). By 1885 the number of trains had been reduced to two, and stops at Kirkby Thore inserted. These left Penrith about 1 and 5.35 p.m. and Appleby 1.10 and 5.45 p.m. Southbound connections at Appleby were given into the up day "Scotch Express," and the afternoon train for Leeds, which then left Glasgow about 2.30 p.m.; in the reverse direction the connections from Appleby were made off the 10.30 a.m. from Leeds and the day "Scotch Express" from St. Pancras. During the winter only the mid-day train from Penrith and the evening one from Appleby were run, and on this basis the service existed until withdrawn on October 1, 1893.

No through passenger trains appear to have been run over this route subsequently, and I should be interested to know of any example when it has been used. with, if possible, the date confirmed. Some of the advertised connections at Appleby between the two stations were close; for one only 9 min. were allowed later, instructions were issued that North Eastern trains to Penrith were to be held for 3 min. to make connection from the Midland on advice of there being passengers.

Bradford has always suffered through not being on the Midland main line, but before grouping, Midland through carriages were liberally provided. Bradford had in the summer of 1911 a through cheap fast train at 6.15 a.m. to Windermere Lake Side. There were a through train at 10.8 a.m. to Barrow and trains from Leeds with suitable connections from Bradford at 1.55 and 3.45 p.m. for Lake Side, all fast between Hellifield and Carnforth; the 1.55 p.m. conveyed through carriages for Coniston Lake. In July, 1910, as an outcome of the L.N.W.-Midland agreement of 1908, the 10 a.m. from Leeds, with Bradford connection, was routed *via* Ingleton and the L.N.W. main line, and, running non-stop Skipton to Penrith, afforded a service between Bradford and Keswick in 3¼ hr. This summer the good people of Bradford are being attracted to the East Coast instead, by the provision of through coaches attached to three trains from Bradford (Midland) to York, Scarborough, and Hull respectively!

Yours faithfully,

V. STEWART HARAM

40, Edenfield Gardens, Worcester Park

Bell Signals

April 23

SIR,—The report of the Sharnbrook accident in your issue of April 21 is certainly revealing. Some points were probably understood, but not mentioned. Bells should be distinctive; I have known cases where they were so alike that paper or chewing gum or some other substance had to be stuck on to give a difference. Possibly these were temporary replacements, but remarks passed about them did not give that impression.

Block instruments on permissive lines should show the number of trains in the section. It is usual for a signalman to tell a driver what is ahead of him, often measured in wagons, as a train may mean practically anything from a light engine to maximum loading.

On the subject of using block bells to call a man to the telephone one has met the two-beat method, which seems asking for trouble, but another in general use seems the better of the two; it consists of a variation of the single beat: (*a*) if the hammer strikes and releases immediately, it calls attention to the block instruments; (*b*) if the hammer strikes, but pauses, before releasing, it calls attention to the 'phone.

At various places I have heard bells so sluggish that one has wondered whether they were single-beat or tremblers. I once came across a block bell that could hardly be heard in the box and also required very slow deliberate sending. The linesman was struggling with it when I arrived in the neighbourhood and was still struggling with it when I left four years later. The distant signal at the other end of that section was not repeated. It was just visible, half a mile out, in clear weather, but if it was misty it was impossible to know what indication was being exhibited, and that was exactly when the signal was most required. None of the lights was repeated.

Yours faithfully

COURTENAY BARRY

The Old Manor, Salisbury

THE SCRAP HEAP

Oldest Operating Railroad in U.S.A.

Oldest operating railroad run in America ended recently, just 120 years after it began, when Baltimore & Ohio No. 47, "Mount Airy Local," completed its graveyard run over the ancient main line from Baltimore to Ellicott City and back. When this railway started operating commercially in the year 1830 horse-drawn coaches were used.

"For the last decade," quoting the *Baltimore Morning Sun*, "the train consisted of a gasoline motor drawing one car with about 25 passengers on the way up and back. For sentimental reasons, a locomotive was attached to the train on its last run. There were three coaches to take the several hundred passengers who wanted to bid *au revoir* to the service."—*From the "Railroad Magazine."*

Marylebone Metamorphosis

The Great Central Railway, I have heard, was built that well-to-do and leisurely-minded people from the middle of England could travel to Lords like gentlemen. During the winter Marylebone Station looked like a country house when the family are not in residence. The station staff gossiped from nine until six, making little jobs for themselves with a casual duster. That apart, however, the station was settled in reposeful dignity.

But in summer-time, on match days, about eleven o'clock, it bustled expectantly as though the family were moving in. And by and by the family arrived—retired clergymen in panama hats, elderly squires who wondered if this over-arm bowling was quite the thing, a few ladies with smelling salts in case the heat became oppressive and, of course, in the school holidays, the young gentlemen in blazers. They were all gently decanted by discreet trains which then meandered off into the country to kill time until seven that evening.

All this was before they took to playing Cup Finals at Wembley Stadium. These Cup Finals have had a terrible effect on Marylebone. Things happen there which would have turned the softly mellowed brick of the old station scarlet with shame. Queues form at the booking-office, trains hustle each other in and out with ill-bred haste and rather vulgar efficiency. No one can get a seat, nobody shows respect to first-class ticket-holders and the air is full of rude noises. You can almost hear the station protesting that times are not what they were, that they'll be running cheap day excursions next. Why, she says, they're turning me into nothing better than a main-line terminus.

Last Saturday I saw a relic of old Marylebone days. He wore black coat, striped trousers and wing collar. His bowler, unlike any other on the station that day, was neither striped nor brightly coloured, but just black. He glared fiercely through his pince-nez at the dinner-bells, the rattles and the outsize rosettes; he seemed to be reminding himself to complain at the next board meeting that that stationmaster fellow had failed to bow him into his compartment, had failed not merely to bow but to appear at all.

In the meantime, and in the absence of the stationmaster, he'd simply use his umbrella, which had never been unfurled against the rain, to prod these people out of his way.

There was, of course, no seat for him. Already the backs of standing passengers were protruding through open windows. He prodded at one such back, dusted the door-handle and strode at the compartment as though it was empty. Someone forced the door shut behind him. Seconds later, first his umbrella, then his face, appeared through the window. One hand was struggling to extract itself from his coat pocket. The hand broke free at last, and it too emerged through the window holding an enormous whistle.

Without further warning this relic of old Marylebone blew violently on his whistle, paused, shouted "Up the Arsenal!," then blew another blast. He was trying to fix a red favour to his lapel as the train drew out. I shall remember this Cup Final by him and by him alone. —*From an article by J. P. W. Mallalieu in the "Spectator."*

Safety on the Track

Two ways of doing a job

—From "Safety on the Track" (see our April 21 issue)

Bouquet for Ripon Porter

Recently and at very short notice a pedigree milking goat was sent to us by train from Scotland. We had no time to make arrangements with the railways, and as we were busy milking we were 20 min. late in meeting the evening train when it arrived in Ripon.

In that time a telegram had already been sent to us to tell us she had arrived. A message was sent up the platform from a station porter to say he would not bring her to us until the next train had gone in case she should become frightened. In any case she was busy eating the meal he had just given her.

Finally, we were shown her in a warm draught-proof room contentedly eating. As a result of this care her milk-yield never dropped, and we are very grateful to the Ripon Station staff.—*From a letter to "The Yorkshire Post."*

The Railway Flower Shop

There is a spot, within the mælstrom's heart,
Where beauty's self adorns the shifting scene;
There is an oasis, a place apart,
Where only loveliness presides as queen.

There, where the rushing tides of man converge
Into a ceaseless cataract of sound,
The gentle emblem of the year's upsurge,
The pure, pale primrose, casts its gleam around.

Soft, subtle fragrances invade my room,
Surmounting odours of a baser strain;
Wall-flower and lilac, mingling their perfume,
Bring old, forgotten dreams to life again.

Roses to follow and the loveliness
Of summer's pageant animates the place;
The golden gallantries of autumn's dress,
The frail perfection of the lily's grace.

And, side by side with Flora's lavish store,
The world's rich harvests crowd upon the sight;
Lo! here be luscious grapes and fruits galore,
E'en though the coy banana hides its light.

To catch a glimpse of nature's comely face
Restores the sunshine to our sombre sky;
Let us be thankful for this means of grace,
We take so much for granted—you and I.

A. B.

OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

SOUTH AFRICA

Road and Rail Co-operation

The period of summer rains just ended produced many examples of the advantages brought about by the unified control of the air, road, and rail services of the Union under a single administration. On numerous occasions, severe damage to track caused only the minimum of delay as road and air services were called on immediately to assist in transporting passengers to their destinations.

During the summer many parts of the Union and South-West Africa received torrential rains which caused severe damage to railway track. Main-line traffic was dislocated, and in many instances some time elapsed before the lines could be repaired. Road motor services transported the stranded passengers and their effects, and there was little delay. Several instances occurred on the main lines of the Cape Midland and Cape Eastern systems.

Mainly in connection with railway accidents during 1949, the road vehicles in the Transvaal operated services in emergency over 3,233 miles, carrying 4,386 passengers.

In the latter part of March, South West Africa had the heaviest rains in living memory. In the Keetmanshoop area much damage was caused by floods. On one section, 50 miles of track were washed away, bridges were destroyed, and all transport services in the area came to a standstill. Aeroplanes and road vehicles provided by the administration took over the task of transporting the passengers and their luggage.

The worst damage occurred on the 50-mile stretch between Mariental and Asab. So complete was the destruction that services could not be resumed for several days, and repair work required the requisitioning of several hundred labourers from the Union in addition to local labour. At the same time heavy washaways occurred in the Orange Free State, the North-Western Cape, and the Cape Midlands.

Traffic Features

Final returns for December, 1949, the ninth month of the last financial year, show that the total tonnage of all classes of traffic carried by the railways was 45,098,509, an increase over the corresponding period of the previous year of 1,214,793 tons. The total for December was 4,635,153 tons, a decrease of 566,216 in comparison with the preceding month.

Cattle, sheep, and goats were conveyed in large numbers last March. When rains brought relief to the drought-stricken areas of the Cape Midlands, cattle and other stock were brought back from the other parts of the country where they had been sent while the drought persisted. In the second week of March, 5,252 wagons were loaded with livestock, 922 wagons more than in the preceding week.

Natal South Coast Line

Eleven Class "16" engines have been allocated to the Natal South Coast line between Durban and Port Shepstone. This line has received attention for many years, and improvements have gradually been introduced. They include the new bridge over the Umkomaas River, relaying with heavier rails, building of turntables for locomotives, and the provision of additional loops. Tests were recently carried out, and as a result it is hoped to reduce running times between Durban and Kelso, and Durban and Umkomaas. Fast trains between the latter two points will be accelerated by about ten minutes with the additional locomotive power now being provided.

AUSTRIA

Electrification Progress

The electrification of the southernmost section of the Salzburg-Bischofshofen-Villach main line (23 miles, between Spittal-Millstättersee and Villach) begun in 1948, as stated in our issue of November 5, 1948, is reported to be nearing completion. This conversion is to be followed by that of the main line between Villach and Tarvisio, the Italian frontier station on the Udine-Venice main line; the latter has been electrified for some years between Tarvisio and Udine (58½ miles). The distance between Villach and Tarvisio is 17½ miles, and when this conversion is completed, electrification will be continuous across Austria in a north-south direction from the German frontier at Salzburg to the Italian frontier, just over 134 miles.

Other lines of the Federal Railways now being electrified are the section between Bischofshofen, on the above-mentioned line from Salzburg, 33½ miles south of that town, and Stainach-Irdning, 51 miles east of Bischofshofen, on the main line for Selzthal. At Stainach-Irdning, connection will be made with the standard-gauge line traversing the Salzkammergut *via* Bad-Aussee and Bad-Ischl and connecting at Attnang-Puchheim with the electrified Salzburg-Linz main line. The Stainach-Irdning — Bad Aussee — Attnang-Puchheim line, 67¼ miles long, has been electrified since 1924. The Bischofshofen-Stainach-Irdning line now under conversion is a difficult mountain line section, the worst stretch being the 10½ miles between Bischofshofen and Eben-im-Pongau, where the line rises from 1,781 ft. at Bischofshofen to 2,805 ft. at Eben.

While slow progress is reported on the electrification of the double-track main line between Vienna and Linz, 118½ route-miles long, one project to be taken in hand as soon as possible is the electrification of the double-track main line between Vienna and the Hungarian frontier station of Hegyeshalom, on the main line for Budapest. The distance between Vienna and Hegyeshalom is 49 miles. The

Main-Line Electrification in France

Prototype 2-D-2 locomotive hauling the inaugural train over the recently-electrified line between Laroche and Dijon

Photo] *[French National Railways*

conversion of the double-track Budapest-Györ-Hegyeshalom main line, 121¾ route-miles, was completed in 1934.

When the Vienna-Hegyeshalom and Vienna-Linz electrifications are completed, electric traction will operate right across Austria from Hegyeshalom in the east *via* Vienna, Linz, Salzburg, and Innsbruck, to Bregenz, on the Lake of Constance in the west, 527 miles.

WESTERN GERMANY

New Organisation for Private Railways

At the annual meeting of delegates of private railways recently held at Constance the proposal was accepted that the present associations covering private railways should be consolidated in a general federation to be named Federation of German non-Federal-owned railways (Verband deutscher nichtbundeseigener Eisenbahnen).

At the meeting, Dr. Hans Seebohm, Federal Minister for Communications, read a paper on the competition between the railway and road, stressing the point that in their efforts to beat the road the privately-owned railways had to rely entirely on their own achievements and forces as no public money could be placed at their disposal.

Electrification

The electrification of the main line between Nuremberg and Regensburg, 62½ route-miles, was completed on May 15. Between Munich and Regensburg, 85¾ route-miles, electric traction has been in existence for some years, and the Munich-Nuremberg-Bamberg-Ludwigsstadt main line, 216½ route-miles, connecting at Ludwigsstadt with the Eastern German railways, was among the first electrified main lines in the country.

FRANCE

Reform Bill for the Railways

A Bill covering a scheme for a wholesale reform of the National Railways has been announced by Monsieur Chastellain, Minister of Public Works, Communications & Tourism, before the Conseil de la République in connection with an exchange of views relating to the French investments budget. The Bill will probably come before Parliament for consideration shortly before August 1.

CZECHOSLOVAKIA

New Service to Russia

On May 23 a new service between Prague and Moscow was inaugurated. The route, avoiding Poland, and circuitous, is *via* Zilina, Kosice, Cierna, Mukacevo, and Kiev, and the journey time is 3½ days. Trains are scheduled to leave three times a week each way. At Zilina, connection is made with the "Baltic-Orient" express.

SWITZERLAND

Rhaetian Railways Fare Problem

To meet the mounting discontent over the excessively high level of local fares, the Rhaetian Railways board has decided to grant certain fare reductions to all persons permanently established within the Canton of the Grisons. Proof of the permanent residence must be produced in the form of a certificate issued by the municipal authorities. The reductions will operate from July 1.

Publications Received

The Model Railway Encyclopædia. By Ernest F. Carter. London: Burke Publishing Co. Ltd., 180, Fleet Street, E.C.4. 8¼ in. × 5¾ in. 496 pp. Illustrated. Price 15s. Modern developments, both on real railways and their model counterparts, have rendered obsolete many of the theories and methods to which the model railway enthusiast has so long rigidly adhered. The need for a really comprehensive constructional and operational manual dealing with the smaller scales of railway modelling (gauge 1 or 10 mm. to 1 ft. and less) should be met with this volume, which deals exclusively with British practice. The author has had long experience of model railway construction as an amateur and professionally, has written many books on the subject, and was founder and former editor of *The Model Railway Constructor*. He champions true-scale modelling in all fields—rolling stock, track, signals, buildings, and scenic effects. The manual contains numerous illustrations and diagrams of prototype and model subjects, and a blueprint chart of 24 representative British Railways locomotive types is included. It should assist both the beginner and the expert, and be invaluable as a reference work.

Low Alloy High Tensile Steels.—This illustrated brochure, issued by the United Steel Companies on behalf of a subsidiary firm, the Appleby-Frodingham Steel Company, Scunthorpe, reviews the metallurgical, engineering, and economic factors governing the application of high-tensile structural steels, and gives much practical information. There are also illustrations of high-tensile steels of the H.T.K., M.T.K., A-F Cor-Ten, and Tormane type, as applied to the construction of rolling stock, cranes, excavators, and static structures. This brochure, A.F. 244, can be obtained from the United Steel Companies head office, 17, Westbourne Road, Sheffield, or from any of the district sales offices of the firm.

Timber Industrial Trusses.—A new series of design sheets for timber roof trusses for industrial and commercial buildings has been issued by the Timber Development Association, 75, Cannon Street, London, E.C.4. The sheets cover Type "A" Nos. 9-12, of varying clear spans between brick piers, and include information on loading, construction notes, and adaptation to similar clear spans. Type "A" will eventually cover spans up to 57 ft. 4 in. where no ceiling is required; and it is intended later to design Type "B" trusses to support suspended ceilings.

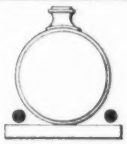
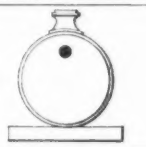
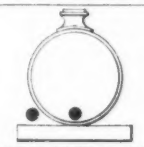
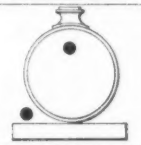
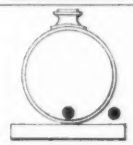
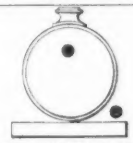
Triangle Refractory Concrete.—An illustrated leaflet, dealing with the application of Triangle refractory concrete mix, has been issued by the Morgan Crucible Co. Ltd, London, S.W.11. Included in the information given are mixing instructions for the material, which can be pre-cast, and the purposes for which it is recommended, these including annealing and heat treatment furnaces, crucible furnaces, core stoves, incinerators, railway shed ash pits, flue linings, and so on. A further illustrated leaflet dealing with the application of Triangle cements for jointing, patching, and wire-wound furnaces has been issued by the same firm.

Gas Welders' Tables & Data. Edited by E. Molloy. London: George Newnes Limited, Tower House, Southampton Street, Strand, W.C.2. 5 in. × 3 in. 166 pp. Price 5s.—This handbook contains a considerable amount of information which will provide a quick and easy reference for welding engineers and operators. The work is arranged in six sections and includes, among other subjects, welding equipment, rods and fluxes, oxygen cutting, and a collection of useful miscellaneous data. It is essentially practical and contains recommended procedure for carrying out various types of welds. Also included are details of British Standard conventional symbols and methods of indicating welds on drawings.

Cook's Holiday Literature.—Most of the resorts on the Rhine, and in the Harz, the Black Forest and Bavarian Alps, and the West and South German spas frequented before the war by British visitors, are included in the current holidays organised by Thos. Cook & Son; this year will see the first performance since 1934 of the Passion Play at Oberammergau. In addition, Thos. Cook & Son Ltd. has issued an illustrated programme of holidays in Portugal, Spain, the Balearics, Malta and Cyprus. Besides better-known resorts such as Estoril, San Sebastian, Malaga, and Palma, the programme includes the bays and fishing villages of the Costa Brava, on the coast of Catalonia. There are in addition inclusive tours round the Iberian peninsula. Cyprus, Malta, and Gibraltar can provide Mediterranean holidays in the sterling area without expenditure of foreign currency, and can be reached easily by British ship or plane.

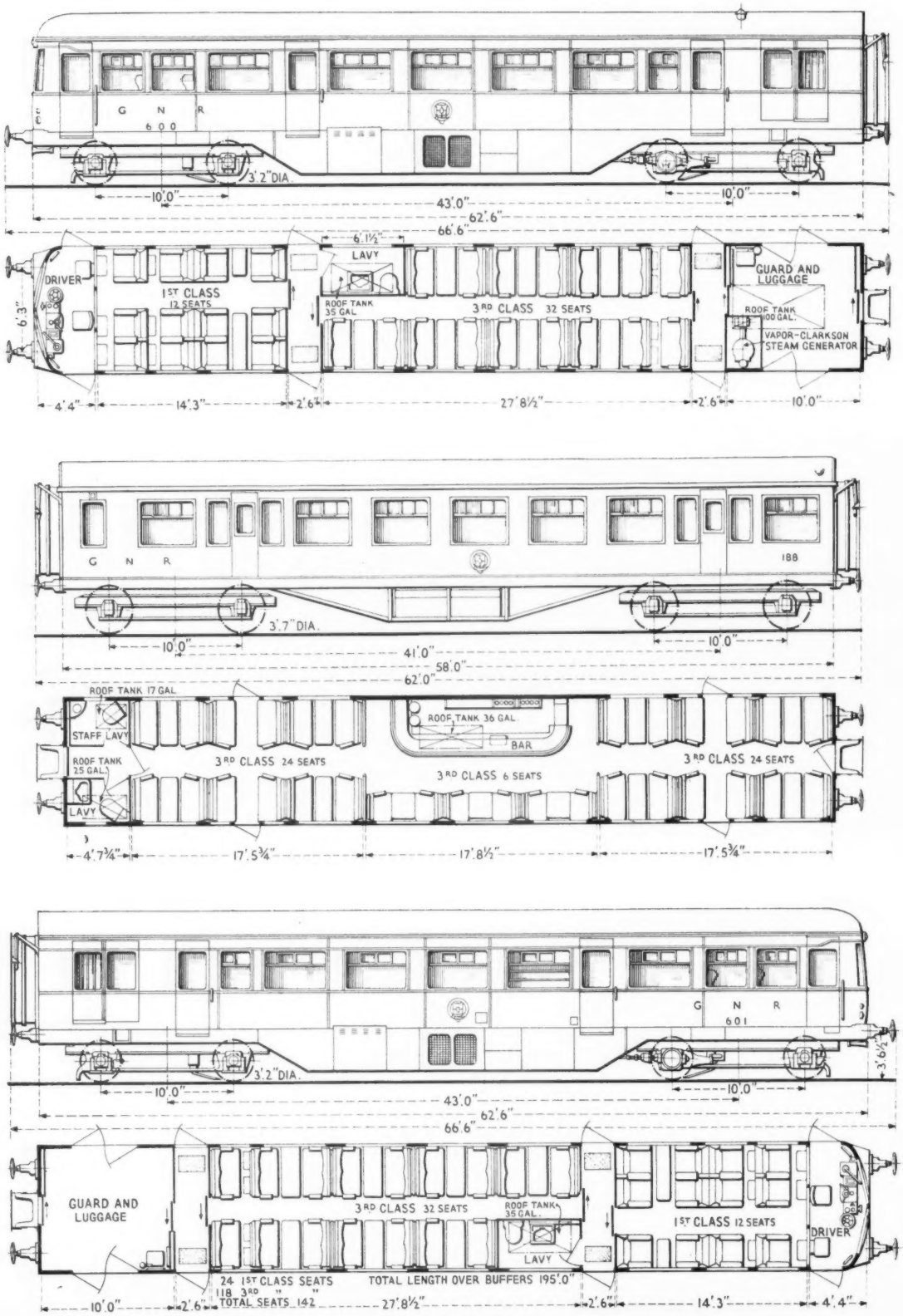
New British Locomotive Headlamp Codes

(*See Editorial Note, page* 615)

Class of Train	Engine Headlamps (white lights)	Description of Train
A		Express passenger train, express diesel car, newspaper train, or breakdown van train, or snow plough going to clear the line, or light engine going to assist disabled train, or fire brigade proceeding to a fire
B		Ordinary passenger train or breakdown van train NOT going to clear the line; branch passenger train or "mixed" train; rail motor train (loaded or empty); ordinary passenger or parcels diesel car
C		Parcels, fish, fruit, horse, livestock, meat, milk, pigeon, or perishable train composed entirely of vehicles conforming to coaching stock requirements. Express freight, livestock, perishable, or ballast train piped fitted throughout with the automatic vacuum brake operative on not less than half of the vehicles. Empty coaching stock train (not specially authorised to carry "A" headlamps)
D		Express freight, livestock, perishable, or ballast train partly fitted with NOT less than one third of the vacuum braked vehicles connected by vacuum pipe to the engine
E		(a) Express freight, livestock, perishable, or ballast train partly fitted with NOT less than four vacuum braked vehicles connected by vacuum pipe to the engine (b) Express freight with a limited load of vehicles NOT fitted with continuous brake
F		Express freight, livestock, or ballast train NOT fitted with continuous brake
G		Light engine or light engines coupled or engine with NOT more than two brake vans attached
H		Through freight or ballast train not running under class "C," "D," "E," or "F" conditions
J		Mineral or empty wagon train
K		Freight, mineral, or ballast train stopping at intermediate stations. Branch freight train

NOTE.—The term "freight train" applies to loaded goods or mineral or empty wagon trains

Express Diesel Train Services for G.N.R.(I.)



Arrangement of three-coach train for the Great Northern Railway (Ireland)

Express Diesel Train Services for G.N.R.(I.)

The first of 20 railcars ordered are about to go into service on a three-coach train between Dublin and Belfast

AFTER long experience of railcar operation the Great Northern Railway (Ireland) decided early in 1948 to purchase 20 diesel railcars and substitute them for steam trains for some main and branch-line services. About six months later an order for these railcars was placed in England. Two of these units for 5 ft. 3 in. gauge were shipped to Ireland some weeks ago, and delivery of the remainder is expected by the beginning of 1951.

Although they can be used as single railcars, the intention is to run them as a three-coach formation of two power cars and one standard coach, as shown in the photograph reproduced below and in the drawings on page 624. An inaugural run took place on June 1 and from June 5 the first train will go into service between Dublin and Belfast. As the remaining railcars are delivered to the G.N.R. (I.) they will be used in trains on main and secondary lines.

When the railcars are running with a special coach incorporating a buffet, there will be a refreshment service to every seat. Seating accommodation in the three-coach train is for 142.

The railcars, which have a maximum speed of 70 m.p.h. at high ratio and 46½ m.p.h. at low ratio, were specially designed and built by A.E.C. Limited, Southall, Middlesex, in conjunction with the G.N.R.(I.), and the intermediate unit consists of a standard coach rebuilt by the G.N.R.(I.) at its Dundalk works and fitted and decorated to match the railcars. Park Royal Vehicles Limited were responsible for the construction of the railcar bodies which were designed in conjunction with the G.N.R.(I.).

The new railcars are generally similar to those built by A.E.C. for the former Great Western Railway, and their design is based on experience gained in collaboration with the G.W.R. from 1934. Those delivered to the G.N.R.(I.) embody various improvements which have been made to A.E.C. equipment from time to time. Their weight is 38½ tons, and they are of the double-bogie type with two independent power units symmetrically arranged on both sides of the frame. The power units and transmission are carried below the floor level, leaving all the floor space available for passengers and luggage.

The engines are A.E.C. 9·6 litre, 6 cylinder, direct-injection compression-ignition oil engines, with A.E.C. open toroidal combustion chambers and masked inlet valves. The bore and stroke are 120 mm. (4·72 in.) × 142 mm. (5·59 in.) respectively, and the engines each develop 125 b.h.p. at the maximum governed speed of 1,800 r.p.m. The maximum torque is 430 lb./ft. at 1,000 r.p.m. The compression ratio is 16 to 1. The drive from the engine is taken through a fluid flywheel and universally jointed shaft to the counter-shaft and thence to a five-speed preselective type epicyclic gearbox by another shaft. The final drive to the axle is of the double reduction type. Two main fuel tanks are provided of 50 gal. capacity each.

The bodies, which are of composite construction, embody all the latest Park Royal design details, and special strengthening arrangements have been made to resist stresses peculiar to railway rolling stock. Special attention has been paid to passenger comfort and visibility. The cars are divided into a driving compartment, first class compartment seating 12 passengers, third class compartment seating 32, and a compartment at the rear for the guard and luggage. There are two vestibules and one contains a toilet.

The main bulkheads are carried up to and attached to the roof, and diagonal bracing is used where possible to counteract racking stresses. Bulkheads other than that between the driving and first class compartments are fully panelled. The latter is glazed from the waist to vent rail.

The exterior of the railcar is panelled with 18-gauge steel sheets screwed to the main framework, and the joints are hidden by steel cover strips. The roof is constructed from rolled-steel sheets fitted from cantrail to cantrail, and the longitudinal joints are lapped and riveted.

The main windows incorporate a 12-in. deep double-slide window. Glazing is by Simplastic section rubber in steel pans, and additional ventilation is provided by 15 Airvac roof vents fitted in the roof. To lessen noise, Bittac sound deadener is sprayed on the inside surface of exterior and roof panels and a ½-in. layer of Insulwood is fitted between the floor boards and the linoleum. Heating apparatus is installed in only one railcar. This is a Vapour-Clarkson steam generator supplying sufficient steam to heat the entire train.

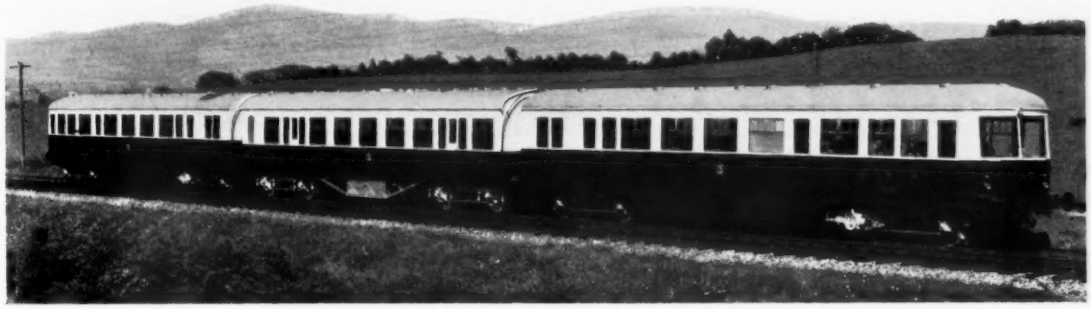
The first class compartments are trimmed below the waist with Moire grained nigger-brown leather cloth and above with beige leather cloth with a nigger brown band behind the chromium-plated luggage racks. This, with the soft Ascot brown moquette used to trim the seats and polished walnut timber finish, gives a warm and pleasing appearance.

Although the railcars are exceptionally wide, only one double and one single seat are fitted in line, which allows for comfortable coach built seats with 4-in. arm rests, and in the case of the two-passenger seat a 6-in. centre armrest. Dunlopillo fillings are used throughout. Where seats are facing, the standard railway type tables are used, but forward facing seats have folding tables fitted with plastic tops.

The finish of the third class compartment is similar in style to the first class, but is carried out in dark blue Everflex below the waist and dove-grey above, the seats being covered in a red mottled moquette.

The intermediate coach, which has been finished in blue and cream by the G.N.R.(I.) to match the railcars, is 58 ft. long by 9 ft. 6 in. wide over body, and

(*Continued on page* 628)



Three-coach train ready for service on the G.N.R.(I.)

Express Diesel Train Services for G.N.R.(I.)

(*See article on previous page*)

First class compartment of G.N.R.(I.) railcar, looking forward

Third class compartment of the railcar, with seats for 32 passengers

Iselin Bridge, Pennsylvania Railroad

Unusual methods and temporary four-track trestle in construction of bridge under a busy main line

THE New Jersey State Highway Department recently built a two-span girder bridge under the quadruple main line of the Pennsylvania Railroad at Iselin, N.J., to enable the new Route 4 parkway to pass under the line. The railway formation at that point was approximately at ground level, and its heavy high-speed traffic could be interrupted only two tracks at a time, and on Sundays. The Highway Authority let the contract to Brann & Stuart, of Philadelphia, for the construction of this underbridge, which was designed jointly by the authority and by the railway administration.

Each span consists of five 83-ft. 3-in. semi-through type main plate girders, with cross girders carrying concrete decking for ballasted tracks. The abutments and pier are of concrete, and are founded on shale overlaid with stable earth, at a depth of about 30 ft. below formation level.

In order to excavate to this depth at three points beneath four tracks carrying such important traffic, careful investigation was necessary; this was followed by months of preliminary work in the construction of a four-track timber trestle viaduct 240 ft. long, which had to be carried out piecemeal to a carefully devised programme, without interruption of traffic.

A Temporary Viaduct

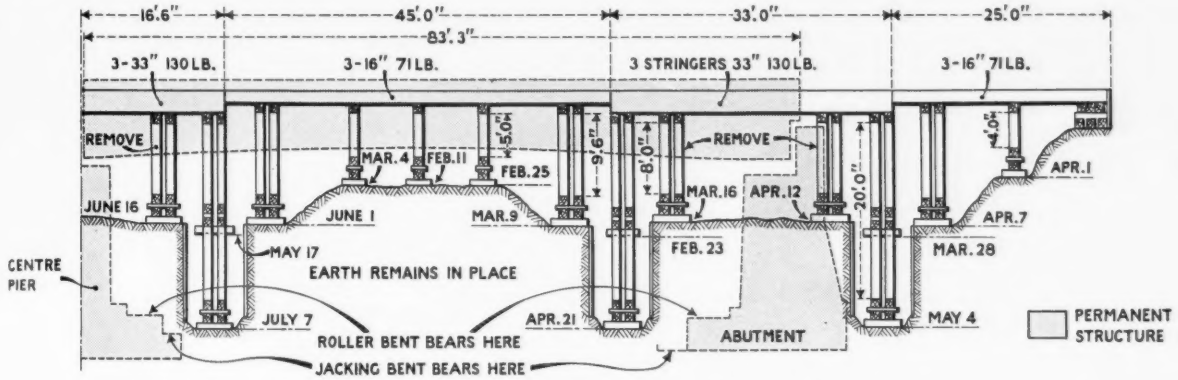
One track at a time was first dismantled and the formation beneath it was excavated to a depth sufficient to allow a locomotive crane to place six 33-in. × 130-lb. wide-flange joist stringers, three under each rail, together with timber sills and packings. 1½-yd. shovels, working from the sides, were used to dig under the alignment of the outer tracks, and ¾-yd. clamshells removed the earth that had been under the inner roads. After the placing of the stringers and sills, the track was relaid over them and the whole solidified by rolling with the crane.

To enable full-speed running to be maintained on adjacent tracks during these operations, special warnings (in addition to the usual flagmen) were installed, as the curve at the bridge site limited the view of approaching trains to a quarter of a mile in each direction. Warning lights at the site, actuated from points two miles away by the passage of approaching engines, gave ample time for loud-speaker warnings to be given to the men on the work, and particularly to crane and excavator drivers to ensure their jibs being clear of the oncoming train.

Excavation to permit erection of the trestle bents under the stringer sills was then undertaken, step by step, in the order shown by the dates on the accompanying drawing. The methods adopted for this excavation are of unusual interest. Abreast of each bent, a pneumatic two-drum winch was installed at one side of the tracks; from it ran a continuous cable passing through a pulley-block attached to a deadman on the far side. In this way a crescent scraper was pulled backwards and forwards along the alignment of the future trestle. One-yard scrapers were used normally for this work, but where headroom was limited open-bottom, ¾-yd. scrapers were substituted.

Some trestles consisted of "single-storey" bents and others were "two-storied." In the case of the latter, the upper storeys were first erected complete with sills, and carried the load until work on the lower storeys could be begun. To facilitate excavation for the lower storeys, adjacent single-storey bents were erected temporarily in order to take the load; those in the areas to be excavated subsequently for the abutments and pier were removed on completion of the two-storey trestles, as shown in the drawing.

Lower-storey excavation was made possible by removing the sills and packings under the upper storeys, leaving the upper-storey bents suspended from the stringers by their capping timbers for the time being. This enabled the ¾-yd. crescent scrapers to work in the 20-in. headroom thus made under the upper storeys. On completion of the excavation, the lower-storey bents were erected under the replaced sills of the upper-storeys and were jacked and wedged up tightly beneath them. Subsequent excavation for the foundations of the permanent abutments and pier was effected with bulldozers. Construction of this temporary trestle viaduct entailed removal of 19,000 cu. yd. of soil and the use of 250 tons of steel.



Erection of trestle bents. The dates show the order of excavation

The construction of the abutments and pier presented no special difficulties. Special footings, shown on the drawing, support (a) the trestle falsework subsequently erected to carry the roller runways on which the two halves of the permanent superstructure were slewed into place, and (b) other trestles used for jacking up the new spans.

Preliminaries to the Changeover

To maintain even the comparatively light Sunday traffic on this section of line, possession of only two tracks could be given on any one day for a time sufficient to enable the changeover to be effected from the trestle viaduct to the permanent bridge. The bridge had, therefore, to be erected and slewed into the line in two halves longitudinally, one half for each pair of tracks, and each half complete as far as possible with concrete decking, ballast, and track.

There being ten main girders, five in each span, one half of the superstructure had to have six and the other four girders. Actually, however, for slewing, the corresponding girders in each span were coupled up over the pier so as to

form three continuous girders in one half and two in the other. The three-girder half, which eventually carried the two eastbound tracks, was the first to be slewed transversely into its final position from the side of the line.

The rollers were each 3 ft. long and of 2½-in. dia. cold-rolled steel. They were assembled in groups and held 1 ft. apart by side bars in each assembly. The rollers rested on groups of four parallel 100-lb. rails, and over them were laid similar but reversed clusters of rails to carry the half-structure. Despite the proximity of these temporary points of support to the permanent bearings, it was necessary to reinforce the girders immediately above the temporary points of reaction by fitting timber web-stiffeners wedged between the flanges.

The second or two-girder half-structure was erected similarly to the first, but it had, besides the cross-girders and decking between the two main girders, a decking to carry the inner track, projecting as a cantilever for subsequent riveting up to the three-girder half. This was temporarily supported on 10-in. × 6-in. falsework brackets, so arranged as to connect with the angle stiffeners of the adjacent girders of the three-girder half. These girders had, in the first instance, been erected with the two-girder half, so as to act as templates while the concrete was poured.

At 4.30 a.m. on Sunday, November 20, 1949, traffic was diverted from the two eastbound tracks to the westbound pair, and two 60-ton locomotive cranes began dismantling the eastbound tracks and half of the temporary viaduct. They worked from the outer track, first removing the inner track and trestles, and afterwards dismantling the outer track and trestling telescopically towards the ends.

By 2 p.m., dismantling was complete and the space was clear for testing the hoists and tackle. After some adjustment, slewing began at 3.15, and the three continuous girders, decking, and track moved over smoothly on the four roller runways, finally coming to rest on the correct alignment at 3.45. The girders were then jacked up, the rollers and runways removed, and the half-superstructure lowered on to its permanent bearings. Meanwhile the tracks had been linked up and the two eastbound roads over the new structure were brought into service again by 5.15 p.m., possession having lasted 13 hr.

On Sunday, December 4, the two-girder half was similarly moved into position. In this case, however, danger of over-turning made it necessary to ballast and lay only the track between the girders before slewing, the cantilevered decking carrying no such load. Despite the necessity for joining up the two halves and the track-work on the inner road after the changeover the period of line occupation was only 11 hr. in the case of the westbound tracks.

For the Pennsylvania Railroad, supervision of the work in the earlier stages was by Mr. T. W. Pinard, subsequently appointed Chief Engineer of the Long Island Railroad. Latterly, Mr. L. P. Struble, Chief Engineer, Eastern Region, P. RR., was in charge.

We are indebted to our American contemporary, *Engineering News Record*, for the foregoing information and for the illustrations reproduced.

Dismantling of half of the temporary viaduct almost complete 8½ hr. after commencement of operation

Express Diesel Train Services for G.N.R.(I.)

(*Concluded from page* 625)

provides seating for 54 third class passengers on tubular framed seats upholstered in moquette of similar pattern to the third class seats in the railcars.

The body, including the roof, is of timber, and the sides are panelled on the outside with tempered Masonite. Tables are provided at all seats except the 16 situated at the four side entrance doors. A bar occupies the centre of the vehicle at which refreshments can be obtained or from which service can be given throughout the train. The interior is an open saloon compartment; other than four chromium-plated roof supporting pillars, no partitions are provided.

The interior finish is in Everflex, dark blue below waist rail and light blue above, with ivory ceiling. The bar top is covered in grey Formica. The floor, which is of double type with insulation, is covered with inlaid linoleum in blue patterned squares. Two glazed recesses are provided in the front of the bar to act as showcases. Storage cupboards, presses, sink, and so on, are provided under the bar; the partition at the back contains a showcase, with duplicate four-bottle optics, one for Northern Ireland and one for the Republic of Ireland. Calor gas is installed.

The body side windows are glazed with ⅜-in. polished plateglass carried in Clatonrite rubber frames. Sliding ventilators with chromium-plated frames are provided above each large window. The nine roof lighting fittings are of the recessed type fitted with Holophane glassware; and in the bar there is concealed lighting behind the canopy. Ventilation is by electric fan set into the roof. The two batteries are charged from a Stone's dynamo.

Two lavatories are provided, one for passengers and the other for staff, and these are finished in pale-green tiled Unilac board.

The exterior finish of the train is in standard G.N.R.(I.) colours of royal blue below the waist and cream upper panels separated by a narrow black band and with a grey roof. Valances 3 ft. deep are fitted over the engines and radiators, with valances 1 ft. deep over the bogies, and these are finished in royal blue to match the body. Headstocks and buffers are painted black. The crest is on the centre panel on both sides.

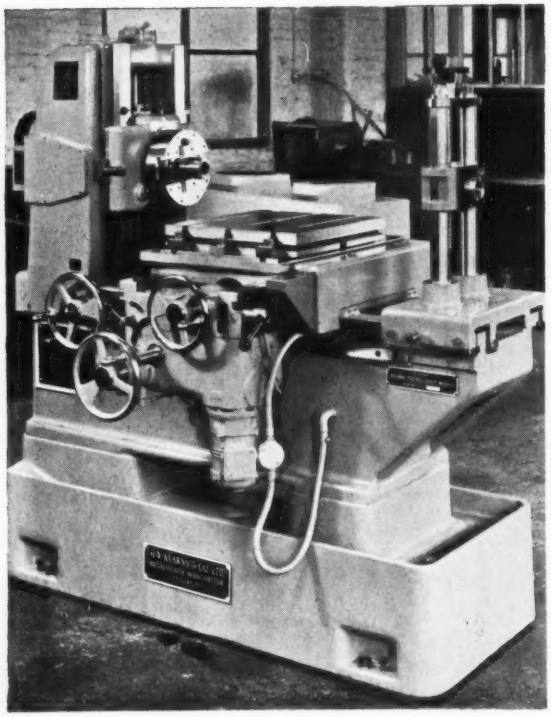
Iselin Bridge, Pennsylvania Railroad

Final preparation of new half of bridge (right) before slewing into place of temporary trestle (left)

New half-span resting on rollers on falsework ready for slewing

Tool Room Boring Machine

Application of an optical measuring system



Kearns tool room horizontal boring machine

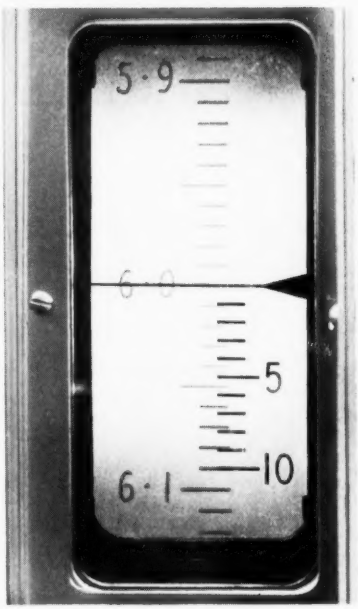
A NEW machine exhibited at the Canadian International Trade Fair at Toronto is one designed with a view to supplying a machine to bridge the gap between the normal high-grade machine and the more expensive jig borer. Developed by H. W. Kearns & Co. Ltd., Broadheath, Manchester, this boring machine is capable of performing to a high degree of accuracy, surfacing, boring, milling, and drilling, the operations being carried out in one setting of the component as far as possible.

To ensure the accuracy desired in setting work relative to the spindle centre, incorporated in the machine is a patented Optimetric measuring system designed by Hilger & Watts Limited, of London. This measuring system is fitted to both the vertical and transverse motions of the machine, and consists of a glass scale mounted in adjustable brackets; the markings, in hundredths of an inch, have been engraved on the underside of the glass.

These markings are projected on to a large ground-glass screen on which are widely-spaced marks of the vernier scale for sub-dividing to 0·001 in., or, in the case of the metric system, direct-reading to 0·01 mm. The rule is projected on to the same side of the ground-glass screen as the vernier markings, and it is claimed that parallax errors when reading are not possible, and that the illuminated screens, 1½ in. × 4 in., completely eliminate microscopic eyestrain.

Both mountings are adjustable; therefore the rules can be set to any required datum line within a range of 1 in., and it is also claimed that the system is such that settings are obtainable to 0·001 in. or 1/100 mm. to an accuracy of 0·00025 in. or 1/200 mm. It is further claimed that the measuring system, being built into the machine, requires no gauges or dials for setting, and reduces very considerably the possibility of errors.

To ensure full use of the accuracy to which the spindle slide can be set a special locking system, which consists of a steel strip on both sides of the upright and two locking clamps on the spindle slide, are provided, by which the spindle slide can be set to position and locked without disturbing the accuracy of the setting. Another feature is the built-in facing chuck, the facing slide of which can be adjusted while the machine head is rotating, boring and facing being carried out with a simple design of stout boring bar.



View of screen and vernier scale

RAILWAY ELECTRIFICATION AND ROAD COMPETITION.—The view that more electrification would economically transform the railways was expressed by Mr. Alfred Barnes, Minister of Transport, when he spoke at a luncheon of the Electric Vehicle Association in London on May 23. Mr. Barnes declared that the development of the road vehicle, in all its different types, had jeopardised the whole of the railway systems, not only of this country, but of the world. He did not take a gloomy view of the future of railways in Britain, because he was convinced that there would be a transformation when electricity was completely harnessed to rail traction.

INCREASED RESTAURANT CAR PRICES.—The Hotels Executive has announced the increase in prices of meals in restaurant cars from June 5. The price of breakfast will be increased from 3s. 6d. to 4s. and lunch and dinner will cost 5s. instead of 4s. A plain breakfast will be available on all restaurant cars for 2s. 6d. The charge for full afternoon tea remains the same at 1s. 6d., but a simpler service is being introduced for 1s., which will include a pot of tea, bread and butter or toasted tea cake, sandwich, and cake or biscuits. The announcement points out that for each main meal served at 4s., salaries and wages now amount to 2s. 4d., and repairs, maintenance, fuel, lighting, laundry, uniforms, and insurances to over 1s., before allowing for the cost of the food supplied.

PRIVATE SHOWING OF TRANSPORT FILMS.—Members of Parliament were given a private showing last week, on May 25, of three of the new British Transport Commission films which were shown for the first time on May 18, as referred to in our May 26 issue. The arrangements were made by Mr. David T. Jones, M.P., Parliamentary Private Secretary to the Minister of Transport, at the request of Members who were unable to be present at the premiere on May 18, and those present included Sir Cyril Hurcomb, Chairman of the British Transport Commission, and Mr. John Benstead, Deputy-Chairman.

BRITISH TIMKEN RESULTS.—The group profit for 1949 of British Timken Limited was £313,000, against £293,129 in 1948, while tax paid amounted to £374,447, against £342,998. An ordinary dividend of 15 per cent. is again recommended.

APPLICATION OF STEEL TUBES TO MECHANICAL HANDLING.—The firm of Tubewrights Limited, a subsidiary of Stewarts and Lloyds Limited, will be exhibiting at the Mechanical Handling Exhibition from June 6-17 a representative selection of tubular steel stillages developed for British Railways and other industries. There will also be a range of photographs of tubular steel crane and dragline jibs, and also erection sticks ranging from 30 ft. to 120 ft., as well as other examples of the application of steel tubes to mechanical handling problems. Tractor hoists and car loading gear for use at docks will also be shown.

RAILWAY NEWS SECTION

PERSONAL

C.I.E. Board Appointments

The Irish Government on May 25 announced the names of Members of the new board of Coras Iompair Eireann. Mr. T. C. Courtney, Chairman of C.I.E. since February, 1949, has been appointed Chairman of the new board and the other Members are:—

Mr. John Bruton, Chairman of the Dublin Port & Docks Board, and Vice-Chairman of the Irish Cattle Traders' Association and the Cattle Traders' Insurance Board.

Mr. Dominick Leo Daly, Director, M. D. Daly & Sons, Ltd., and Irish Dunlop Co., Ltd.

Mr. Patrick Joseph Floyd, Traffic Manager, Great Southern Railways, 1928-42.

Mr. Edward H. Murphy, Director & Secretary, Murphy Bros., Ltd., Ballina, and member of committees of the Irish Flour Millers' Association.

Mr. William Murphy, Official of the Irish Transport & General Workers' Union.

Senator John Thomas O'Farrell, Member of Seanad Eireann from 1948 and from 1922 to 1936, also Irish Secretary, Railway Clerks' Association, 1918-48.

Members of the board are appointed for a term of five years. The position of the Chairman is full-time, and the appointment of the other Members is on a part-time basis. The Irish Transport Act, 1949, under which the new board has been set up, became operative on June 1.

The Anglo-American Freight Handling productivity team, which left this country for the U.S.A. on May 27, was entertained at an informal dinner at the Great Western Royal Hotel on May 26, at which Mr. David Blee, Member, Railway Executive, was present. The team, led by Mr. A. C. B. Pickford, Executive Officer, Terminals, Railway Executive, includes:—

Railways Supervisory Group, Mr. E. K. Whittingham, and Mr. J. H. Vine, Railway Executive; Railways Trade Union Group, Mr. R. F. Aston and Mr. E. G. Bowers.

Dock & Harbours Supervisory Group, Mr. L. G. Taylor, Docks & Inland Waterways Executive, and Mr. F. J. Dowsett, Port of London Authority; Docks & Harbours Trade Union Group, Mr. T. W. Condon, T. & G.W.U.

Road Haulage Supervisory Group, Mr. T. G. Gibb, Road Haulage Executive, and Mr. R. L. H. Farmer, Atlas Express Carriers Co., Ltd.; Road Haulage Trade Union Group, Mr. F. Cousins, Transport & General Workers' Union.

Representatives of Users, Mr. G. A. Baxter, National Farmers' Union; Mr. D. H. F. Joyce, Shell-Mex & B.P. Limited; Mr. H. Davies, Rubery, Owen & Co., Ltd.; and Mr. W. Ingleson, Cadbury Bros., Ltd.

Secretary, Mr. C. H. White, Railway Executive.

Mr. J. S. Wills, who will take office on October 1 as President of the Institute of Transport for 1950-51, is Managing Director of the British Electric Traction Co. Ltd. He was educated at Merchant Taylors' School and joined the British Electric Traction organisation in 1922; until 1923 he was Assistant to the Secretaries of the B.E.T. and British Automobile Traction Co. Ltd. From 1924 to 1926 he was Secretary to a number of companies in the B.E.T. Group. Mr. Wills was General Manager of East Yorkshire Motor Services Limited at Hull from 1926 to 1931, when, at the age of 26, he was appointed a Director of that company and of several other omnibus companies associated with the B.E.T. He was appointed to the Board of the British Electric Traction Co. Ltd. in 1939, and was appointed Managing Director of the Company on January 1, 1946. Among other positions Mr. Wills holds are those of Chairman of B.E.T. Investments Limited, B.E.T. Omnibus Services Limited, Birmingham & Midland Motor Omnibus Co. Ltd., East Yorkshire Motor Services Limited, Laundry Services Limited, and Western Welsh Omnibus Co. Ltd.; Chairman and Managing Director of Broadcast Relay Service Limited, and National Electric Construction Co. Ltd.; Director of Advance Laundries Limited, Birmingham & District Investment Trust Limited, Electrical & Industrial Investment Co. Ltd., Monotype Corporation Limited, South Wales Transport Co. Ltd., Swansea Improvements & Tramways Company, and four companies with South African investment interests. For some years until April, 1948, when the company was dissolved under the Electricity Act, he was Director of the Yorkshire Electric Power Company. Mr. Wills is President of the B.E.T. Federation Limited. He was Chairman of the Public Transport Association in 1945-46 and now serves as a Member of Council; he is a Member of the National Council for the Omnibus Industry, having previously been Chairman of that body. He is the immediate Past Chairman of the Air Transport Section of the Standing Committee of the London Chamber of Commerce and Deputy Chairman of the Joint Air Transport Committee of the Association of British Chambers of Commerce, the Federation of British Industries, and the London Chamber of Commerce. Mr. Wills has been a Member of the Council of the Institute of Transport since 1944, and was made a Vice-President in 1947.

Mr. J. S. Wills
President of the Institute of Transport, for 1950-51

Institute of Transport

The undernamed have been elected by the Council of the Institute of Transport to hold office for the year commencing on October 1, 1950:—

President: Mr. J. S. Wills; Vice-Presidents: Messrs. J. W. S. Brancker, General Manager (Commercial), B.O.A.C.; C. T. Brunner, Director & Joint General Manager, Shell-Mex & B. P. Ltd.; S. Kennedy, Chairman, Tilling Group Management Board, Part-time Member of the Road Passenger Executive; V. A. M. Robertson, C.B.E., M.C., Chief Civil Engineer, Southern Region, British Railways; A. B. B. Valentine, Member, London Transport Executive; W. Donaldson Wright, formerly Director, Donaldson Wright, Ltd. Honorary Treasurer: Mr. A. L. Castleman, formerly District Goods Manager, L.M.S.R. (Broad Street). Honorary Librarian: Mr. A. B. McLeod, Stores Superintendent, London Midland Region, British Railways. Past-Presidents to serve on the Council: Sir Frederick Handley Page, Messrs. R. Kelso, D. R. Lamb, Brigadier-General Sir H. Osborne Mance, Messrs. R. Stuart Pilcher, T. W. Royle.

British Railways, Southern Region, announce the following appointments:—

Mr. C. F. Sanders, British Transport Commission Legal Service, to be Chief of Section (Compensation).

Mr. W. H. Dabney, Assistant London West Divisional Superintendent, to be Assistant to Commercial Superintendent (Passenger).

Mr. E. R. Williams, Assistant to District Operating Superintendent, Stratford, Eastern Region, to be Assistant General Agent for France.

Mr. T. H. Shields, Motive Power Department, Scottish Region, to be Assistant to Motive Power Superintendent (Mechanical).

Mr. H. E. Parkes

Member, Transport Tribunal, who has retired

Mr. J. C. Poole

Appointed Member, Transport Tribunal

Mr. Frank F. Fowler

Appointed National Chairman, Road Haulage Association

Mr. H. E. Parkes, C.B.E., who has retired as a Member of the Transport Tribunal, on the expiry of his current appointment, from May 3, 1950, was first appointed as a permanent Member of its predecessor body the Railway Rates Tribunal in 1931. He had previously been a Director of E. Parkes & Co. Ltd., West Bromwich, and Chairman of the Birmingham Corrugated Iron Co. Ltd., as well as a Director of the Austin Motor Co. Ltd., and certain other companies. He has served on the Finance and Transport Committees of the National Federation of Iron & Steel Manufacturers and was at one time a Vice-President of the Association of British Chambers of Commerce. He is a former president of the Birmingham Chamber of Commerce and has served on the Birmingham City Council. He was a member of the Committee on Police pay and conditions of service presided over by Lord Oaksey. Mr. Parkes is a Member of the Panel of Representatives of Employers of the National Arbitration Tribunal and a member of the Chancellor's Panel of the Civil Service Arbitration Tribunal.

Mr. J. C. Poole, C.B.E., M.C., who has been appointed a Member of the Transport Tribunal for a period of six years from May 4, 1950, is a former Director of the Paints Division of Imperial Chemical Industries Limited and a former Chairman & Managing Director of Nobles & Hoare Limited. From 1944 to 1946 he was Treasurer, and from 1946 to 1948, Deputy-Chairman of the Council of the London Chamber of Commerce, of which, from May, 1948, until recently he has been Chairman. From 1946 until recently he was Honorary Vice-President, and Chairman of the Home Affairs & Transport Committee of the Association of British Chambers of Commerce; and from 1946 to 1947 he was a Member of Central Committee of Transport Users. Mr. Poole has been connected with the paint trade since 1926, and held office as a Member of the Paint Advisory Council to the Board of Trade since its inception and as a Member of Council of the National Paint Federation. He is a Member of the National Advisory Council to the Minister of Labour for the Employment of the Disabled, and Chairman of the Training & Employment Committee appointed by that council.

Mr. Frank F. Fowler, who, as recorded in our May 5 issue, has been appointed National Chairman, Road Haulage Association, founded the original Short Distance Hauliers' Alliance, and held important positions on that body, on the first R.H.A., the A.R.O., and the C.M.U.A. Since the merger of the Associations in 1945, he has been a Member of the National Council of the R.H.A. and Chairman of

Mr. H. N. Junor

Appointed Chief of Way & Works, D.F. Sarmiento Railway, Argentina

Mr. T. B. Hare

Principal, British Railways All-Line Operating School, Darlington, who has retired

Mr. E. W. Marten

Who is making a tour of overseas railways

the National Rates Committee; he is Chairman of the National Short Distance Central Panel. Other offices Mr. Fowler has held include the Chairmanship of the Metropolitan Area and of the National Tipping Vehicle Functional Group, he is also a Member of the Metropolitan Road & Rail Regional Committee, and Leader on the Employers' Side of the Road Haulage Wages Council. Mr. Fowler has been a Vice-Chairman of the Road Haulage Association for the past two years.

Mr. H. N. Junor, who has recently been appointed Chief of the Way & Works Department of the D.F. Sarmiento Railway, was born in Buenos Aires in 1897, and completed his technical education in the Industrial School of the Nation, later taking his degree as a civil engineer in the National University of Buenos Aires. In 1919 he joined the Buenos Ayres Western Railway as Assistant District Engineer in Trenque Lauquen, and was transferred to headquarters shortly afterwards, where he was concerned with bridges, buildings and hydraulic works, especially those connected with rail transit through the city of Buenos Aires and the modernisation of the suburban lines. On the separation of the joint administration of the Buenos Ayres Great Southern and Buenos Ayres Western Railways, Mr. Junor was designated Chief of the Way & Works Department of the B.A.W.R., being required to organise the department in accordance with the new conditions. Mr. Junor is also Chairman of the Committee of Way & Works Engineers of the Argentine Railways.

Mr. T. B. Hare, Principal of the All-Line Operating School, Darlington, since 1943 and in recent months also acting Principal of the Commercial School, Darlington, who, as recorded in our May 26 issue, has retired, entered the North Eastern Railway service as a junior clerk in the office of the Superintendent of the Line in 1899. After some eight years in the different sections of that office he was transferred to the District Superintendent's Office at Sunderland, and subsequently was appointed District Inspector. Mr. Hare was one of the first batch of students at the evening courses of lectures arranged under the North Eastern Railway Secondary Educational Scheme and was subsequently seconded to the staff of Armstrong College to assist Professor Hallsworth with the collection of data for his lectures and text book "The Elements of Railway Operating." He then returned to headquarters to be second Staff Clerk to the General Superintendent, where he stayed until released to take up a commission in the 17th Northumberland Fusiliers, raised by the North Eastern Railway; he was later transferred to the newly-formed Docks Directorate. After service in France, he returned to railway service to become Chief Staff Clerk to the General Superintendent. In 1920 he was appointed Yardmaster, Newcastle (Forth) and in 1921, Assistant District Superintendent of the Middlesbrough District; about a year later he was transferred to a similar position in the Hull District. He became District Superintendent, Middlesbrough, in 1928. In 1932 it was decided that the Middlesbrough and Darlington districts should be operated as one district; Mr. Hare was appointed to make the necessary amalgamation and take charge of the new district, with his headquarters at Darlington. During the late war the L.N.E.R. directors decided to establish a residential school for the training of operating staff, and when this was done in 1943, Mr. Hare was appointed the first Principal of "Grantly," the L.N.E.R. All-Line Operating School. He is author of "British Railways Operating" and "Practical Railway Operating." Mr. Hare is a Serving Brother of the Order of St. John of Jerusalem.

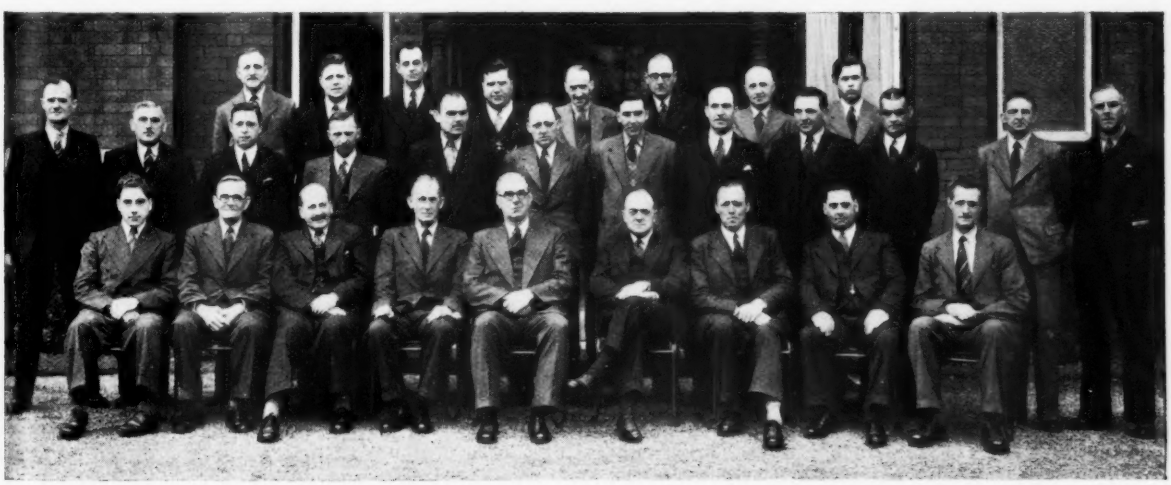
Mr. E. W. Marten, B.Sc. (Eng.), A.M.I.C.E., M.I.Loco.E., Managing Director of Associated Locomotive Equipment Limited, London and Worcester, and a Director of W. G. Bagnall Limited, Stafford, has recently left for a tour of the railways of Australia, including visits to Egypt, Pakistan, India, New Zealand, and the United States, on behalf of both the Brush group and also the Heenan & Froude group of companies. Mr. Marten received his engineering education first at Brighton Technical College, and, after war service with the R.N.A.S. from 1917-1918, including research work at the N.P.L. and Royal Aircraft Establishment, completed his studies as an internal student of the University of London. On graduating in 1921, he was awarded a Yarrow scholarship, and became a pupil of Sir Henry Fowler, then Chief Mechanical Engineer, Midland Railway, passing through the Locomotive Works, Derby, from 1921 to 1924; he was subsequently appointed Resident Inspector at outside works on the construction of locomotives. From 1926 to 1929 Mr. Marten held a technical appointment with Messrs. Fox & Mayo, Consulting Engineers, and when with Beyer, Peacock & Co. Ltd., from 1929 to 1933, his duties involved extensive travel in many parts of the world. Recognising the possibilities of diesel traction, Mr. Marten entered the works of Sulzer Bros., Winterthur, Switzerland, in 1933, for practical experience on diesel engines, and subsequently became Manager, Traction Department, London. He joined the board of Associated Locomotive Equipment Limited in 1941, and has been concerned with the further development of poppet valve-gear practice as applied to steam locomotives and has, since the war, also had the responsibility for the design and development of diesel rail traction units in collaboration with the Brush group of companies.

N.E.R. Workshop Supervisory Courses

The Civil Engineer's Department, North Eastern Region, started on May 1 the first of two five-day refresher courses for district engineer's workshops supervisory staff at Grantly Residential School, Darlington; the courses were organised by Mr. J. Taylor Thompson, Civil Engineer, North Eastern Region, in consultation with Mr. T. B. Hare, Principal of the school.

All districts of the North Eastern Region were represented, including Leeds and Bradford, transferred to the Region in April last. Each course was attended by 22 delegates in all. The subjects of lectures and discussions ranged from foundations of buildings, brickwork and masonry, heavy timbering, plumbing and bridge work to estimating and departmental procedure, covering works and materials organisation and the Cabinet system of works control.

The purpose of the course, said Mr. Taylor Thompson at the opening meeting, was to help supervisors in their ordinary work and knowledge of organisation, and to create interest in what was taking place, not only in their own duties, but in those of the people around them. Students should have no hesitation in expressing their ignorance, as this helped the lecturers to know what was required.



Mr. J. Taylor Thompson with staff and students at the North Eastern Region Workshop Supervisory Course, Grantly (*see article on this page*)

Indian State Railways Dinner, 1950

Sir Edward Benthall, former Member for War Transport, describes recent developments in India and Pakistan

The annual Indian State Railways dinner was held on May 22, 1950, at the Hotel Rembrandt, Thurloe Place, S.W. Sir Leonard Wilson, K.C.I.E., a former Chief Commissioner of Railways, presided and the principal guest and speaker was Sir Edward Benthall, K.C.S.I., Member for War Transport, 1942-46.

The following officers of the various railways were present:—

N.W.R. (57)

Messrs. W. A. Anderson, C.I.E.; W. S. Benton; P. S. A. Berridge, M.B.E.; G. S. Bocquet, C.I.E.; V. H. Boalth, O.B.E.; F. S. Bond; A. C. Brabson; D. C. Campbell, C.I.E.; E. Catley, M.B.E.; A. H. Chilton; R. N. Chrestien; A. Cornish; R. M. Dallas; G. A. Dyke; C. J. Elias; Lt.-Colonel W. T. Everall, O.B.E.; Messrs. L. Flatt, C.I.E., V.D.; H. D. Furley; W. E. Gelson; E. P. Gildea; C. E. Goldsmith; Sir A. C. Griffin, K.C.I.E., O.B.E.; Messrs. F. G. Griffith, O.B.E., V.D.; H. E. Hanson; R. L. Hill; J. C. Highet; H. Hinton-Cooper; H. W. Huggins; N. Johnson; T. H. B. Jones; J. G. Keith-Hitchens; E. L. Manico; Colonel D. McMullen; Messrs. W. L. D. Martyn; B. Moody; A. K. Muirhead; J. W. Ogle; G. A. Plank; H. W. Puttick; W. C. Rodgers; L. C. Ryan; Lt.-Colonel J. R. Simpson; Messrs. A. M. Sims, C.I.E.; W. J. Sorby; W. Strang; C. E. Spurgeon, C.B.E.; E. B. N. Taylor; R. O. C. Thompson, O.B.E., M.C.; J. S. Tritton; O. W. Watkins; N. C. Watney; F. M. G. Wheeler; G. H. A. Wood; Brigadier H. L. Woodhouse, C.B.E., M.C.; Messrs. J. M. D. Wrench, C.I.E.; J. S. F. Yates; and H. N. Young.

G.I.P.R. (33)

Messrs. W. G. Alcock, O.B.E.; A. E. Aylott; S. Barber; F. Barker; D. S. Burn, C.I.E.; G. A. Carter; J. Clegg; Lt.-Colonel E. Colvin; Mr. J. N. Compton, O.B.E.; Sir G. E. Cuffe; Messrs. S. Dolan, M.B.E.; E. L. Ensor; Colonel R. B. Emerson, C.I.E., O.B.E.; Messrs. A. J. Frazer; L. J. Gannon; Major F. W. Gillett; Messrs. W. E. R. Gurney; C. E. Hall; R. J. Harris, M.B.E.; L. Hoyle; W. Hood, O.B.E.; E. Ingoldby, C.I.E.; S. Marchant; J. B. Remington, V.D.; C. I. Routh; D. Scot-Scot; J. E. Tattersall; E. C. B. Thornton, M.B.E.; F. Vibart; J. C. Wightwick, V.D.; Sir L. Wilson, K.C.I.E.; Messrs. A. E. Williams, O.B.E.; and D. Williams, V.D.

E.I.R. (20)

Messrs. H. J. Allinson; C. S. Buike; C. N. Burns, M.B.E.; C. A. Crawford, O.B.E.; A. J. Doran; H. G. Emmerson; S. A. Fanthome; E. R. Fleeton; A. R. Gundry; J. Hannah; R. C. Harvey; J. B. Hemsley; C. G. B. Hinchey, M.B.E.; J. W. C. Holt; T. Kidd, M.B.E.; Sir R. E. Marriott, Kt.; Messrs. F. G. S. Martin, C.I.E., M.C.; G. W. N. Rose; N. W. Synnott; and R. H. Tangri.

B.-N.R. (17)

Messrs. S. W. Bailey; A. H. Bishop, M.C.; S. J. P. Cambridge, O.B.E.; M. R. Carr-Hall; N. H. Cour Palais; W. W. Crealock; P. F. Dennison; E. A. C. Hill; E. W. F. Langer; W. K. Orton; J. A. Parker; R. A. Phillipps; J. A. A. Shea; A. K. Southern; S. Sarter; A. F. Tabraham, V.D.; and G. T. Tait.

M. & S.M.R. (16)

Sir Godfrey Armstrong, O.B.E.; Messrs. W. J. Bannister; W. O. Browne, M.B.E.; H. G. Carpenter; N. Carroll; A. F. Clay; V. J. Crow; R. A. Dickenson; Lt.-Colonel H. E. Edwards; Messrs. L. E. Hawkins, M.B.E.; E. Perfect; R. J. Perry; C. H. S. Saunders, V.D.; B. A. Spencer; B. J. Tapner; and D. O. Thomas.

S.I.R. (9)

Messrs. C. E. Gayes; H. C. Hodgson, T.D.; E. C. Lightbody, M.C.; C. R. Martingell; W. R. Oaten, O.B.E.; H. A. Reid, C.I.E.; Colonel L. S. Sanson; Messrs. H. E. Thompson; and J. F. Wright.

B.B. & C.I.R. (7)

Messrs. J. N. A. James; G. de P. Leeper; W. R. Maunder; P. D. Mitton; G. T. Simpson; H. C. Towers; and Gordon Williams.

Burma Railways

Messrs. D. W. Hadfield; and E. J. R. Markwick.

E.B.R., O. & T.; and B.-A.R.'s

Messrs. F. H. Bibra, V.D.; J. H. Bavin; H. Birney; D. Cardew; N. Calder; G. Cattermole; C. H. Griffiths; P. L. J. Hands; Colonel Sir Gordon-Hearn, C.I.E., D.S.O.; Messrs. H. V. Langley; K. E. Leaver; D. MacAulay; F. E. Musgrave, M.C.; W. M. McGregor, O.B.E.; J. D. B. Osborn; Major W. R. Pearce, V.D.; H. M. Read; R. D. B. Rowbathen; G. A. Rowlerson, M.C.; F. A. Smith, M.B.E.; B. G. Smith, O.B.E.; C. G. Sturt; C. Silvester; G. W. Toogood; F. C. West, M.B.E.; and G. F. D. Windle.

After proposing the health of the King, the Chairman said that this was the fourth of these functions since the war, and the numbers of those attending them were still growing. There were 194 present that night, and this year there had been an innovation in the form of a ladies' tea party, 145 having been present. He thanked Mr. Calder, Hon. Secretary of the I.S.R. Dinner Club, once more for the magnificient service he continued to render in organising these functions, a service which entailed a great amount of work.

Their principal guest that evening was Sir Edward Benthall, who from 1942-46 had been Member for War Transport on the Governor General's Executive Council, and he now asked him to tell them something about present-day India.

Wartime Service

Sir Edward Benthall congratulated the Indian State Railways Dinner Club on the most successful dinner he had ever attended. He was glad to meet again so many old friends, and to be with a number of Chief Commissioners of his time in Delhi—Colonel Emerson, Sir Arthur Griffin, and Sir Leonard Wilson. They were difficult times in 1942; saboteurs had damaged or destroyed some 250 stations; and in 1943 the Damodar flood cut the main East Indian line to Calcutta. The railways had done wonderful work in the war, and, as a tribute to the Chairman in particular, he was glad to place on record that, although they had many tough arguments, particularly with the Army, he could not now recall any advice given to him as Railway Member which had been at fault.

Questioning whether he had been invited as an ex Railway Member or as a railway user, the speaker mentioned that many years ago his firm had been also a competitor, when it ran bullock trains from Manihari Ghat to Siliguri on the alignment of the present Assam Link line. The average speed was about 2 m.p.h., but they operated successfully for many years. On his recent annual visit to India he had found upper-class travel reasonably comfortable except for the overcrowding, having on his last journey shared a six-berth compartment with ten fellow passengers, including two pairs, each sharing one of the racks head-to-foot. In the third class enormous numbers still travelled, and in parts of India the roofs, running boards, and buffers were still well patronised!

All things considered, however, the Indian and Pakistan railways were not doing too badly. The efficiency of the personnel had dropped, and he had seen that about 1,000,000 were now required to run the Indian railways, against 650,000 on the undivided system before the war. This drop in efficiency was, however, a world-wide phenomenon of many industries and the deterioration was the result of war and post-war conditions.

Operation had markedly improved since the difficult post-Partition period, and was reaping the benefit of the 900-1,200 locomotives replaced during the war and 700 recently received.

Turning to accidents, Sir Edward Benthall said that during the last half-year, October to March, there had been 91, on the Indian State Railways, including four major passenger-train disasters since January 1, three at least due to sabotage, in which 200 people had been killed and 500 injured. The Minister of State in charge had stated that 15 per cent. of the 91 had been due to sabotage and the balance to failure of equipment or of the human element, indicating that the sense of duty of the staff had deteriorated. The former Administration had been greatly harassed in the Assembly when accidents occurred, even when sabotage was the cause. He added that the Minister had quoted figures to show that in 1948 the percentage of accidents per million passengers had been better than in the U.S.A., which recalled a similar answer once given by himself!

The speaker said that the movement of coal, which was always an indication of how railways were moving the traffic, had improved. In the second half of 1949, allotments of coal wagons had reached a daily figure of 3,211, which was better than that achieved in war time, when, however, the railways had to move vast traffic. Coal stocks in the coalfields in the six months had been reduced from 2,650,000 to 900,000 tons. Allotments had since fallen to a daily average of some 2,700, but with the reduction of sugar cane and other seasonable traffic, it was hoped that these figures would rise again.

The Pakistan Railways

With regard to Pakistan, the East Pakistan railways had shown a profit, whereas he believed the former Eastern Bengal Railway had seldom done so. On the old North Western Railway, profitable working had also resulted, inclusive of the old strategic lines. In fact, the Pakistan railways had contributed Rs. 3 crores to the general Budget in 1949-50, and the budget for the current year allowed for an increase of one crore on this figure, in spite of the loss of traffic due to the economic difficulties between India and Pakistan. In India a settlement, long sought by the Railway Board, had been reached between the Railway and General Budgets, whereby the railways paid 4 per cent. on the capital at charge and retained the balance of net profits.

In conclusion, Sir Edward Benthall said: "You who have served in the 'Land of Regrets' need have no regrets. You have met tonight in a very proud spirit and rightly so. You have served loyally and well and can be proud of the foundations you have so well and truly laid. You have left behind you a fine network, fine equipment, and, above all, fine traditions. Some of you, the younger ones, may feel regret that you—for one reason or another—felt bound to sever your careers prematurely before the work you loved was done, but you have, between you, handed over a wonderful machine, which is a living monument to your work."

Modernisation of Burntisland Traffic Control Office

Installation of new telephone equipment and the abolition of two manually-operated switchboards

During the last few years a number of Scottish Region traffic control offices, some of which were opened by the North British Railway in 1913, have been modernised in the light of improvements in telephone equipment and some 40 years of experience of layout and fittings. Among the offices recently modernised is the Burntisland district traffic control office, which was brought into operation in its new form on November 20, 1949.

The area controlled from the Burntisland traffic control room includes the Fifeshire coalfields, together with the lines from Stirling in the West to Crail and St. Andrews in the East; Perth in the North-

Section of the modernised control room at the District Operating Superintendent's Office, Burntisland, Scottish Region

West; and from North Queensferry (including the Forth Bridge) in the South to Kinnaber Junction, two and a half miles North of Montrose.

The telephone system formerly in operation included two manually-operated switchboards, one at Dunfermline, 16 miles West of Burntisland, and the other at Ladybank, 19 miles to the East, with trunk lines between the switchboards and the control office at Burntisland. Apart from the saving in line plant, the trunk working gave a measure of relief to the controllers as the exchange operators regulated calls passing over the trunks and also routed them *via* specific lines to the particular section of the control requested by the waystations. This system of working sufficed in the early days of traffic control, but the method of operation over the trunks has been superseded.

In developing the modernisation scheme the principle of trunk working was retained, but the manually-operated switchboards have been abolished and automatic switching apparatus substituted, enabling controllers to have direct access to all the circuits without the delay commonly associated with manual operation. At the same time the trunks now afford full availability to any circuit and *vice versa*. Two isolated coupling units are also installed at points where only one coupling operation is required. A continuous test condition is applied to all trunk lines, which, in the event of a fault, busies-out the faulty line and sets up an alarm. To cater for the signalling period over the trunks, the alarm is delayed for about 30 sec.

Each trunk is required to transmit four incoming discriminative signals to meet the following requirements: Select one of two section controllers; select the ancillary controller as one group; direct calls to Burntisland telegraph office. In the latter connection, to provide for telegraph office traffic, concentrator keyboards are provided at Ladybank and Dunfermline giving access to all circuits at the respective places along with the facility of connecting to any one free trunk to Burntisland. At Burntisland telegraph office a two-way telephone unit gives the latter the same trunk facilities; thus, messages collected at the remote telegraph offices are telephoned to the main telegraph office at Burntisland for disposal as required.

The total number of circuits to which the controllers have access to is as follows:—

Trunk lines	... ...	5 to each switching centre
Selective ringing line	...	19
Code calling lines	...	10

Contact with the adjacent controls at Glasgow, Edinburgh, and Aberdeen is provided for by direct end-to-end circuits. Ring-back tone is transmitted to all waystations, indicating that calls have been correctly routed to the control, and uncoupling signals are transmitted, automatically, by the restoration of the circuit Connect keys on the keyboards at Burntisland.

Fifteen new desks and sixteen keyboards have been installed; the sixteenth keyboard is intended as a spare, but is normally connected up in the apparatus room for the lineman's use. The keyboards are jacked-in and are easily removable for maintenance purposes.

The apparatus and cabling is in accordance with the latest practice, the apparatus racks being fully equipped with fuse and fault alarms, also testing facilities. A comprehensive Tester is provided which covers all line tests and apparatus functions. All the equipment was supplied by the General Electric Co. Ltd., Telephone Works, Coventry, which also carried out the internal installation work. The external installation, including the extension of existing circuits and provision of new circuits was carried out by British Railways staff under the general supervision of Mr. W. Bryson, Signal & Telecommunications Engineer, Scottish Region.

Questions in Parliament

Articles Lost on the Railway

Mr. P. Remnant (Wokingham—C.) on May 15 asked the Minister of Transport how the cash, provided by the payment by individuals of 2s. 6d. in the £ on the value of articles lost on the London Passenger Transport Board rail service when reclaiming them, was dealt with.

Mr. Alfred Barnes (Minister of Transport) in a written answer stated: "The Regulations made by the Minister of Transport in 1933 provide that claimants of lost property shall pay a fee of sixpence for every £1 or part £1 of the value of the property, and, if the value is £1 or more, an additional sum of one-tenth of that value. The fee accrues to the London Transport Executive towards the cost of administering the lost property scheme, and the additional sum is paid by the Executive to a general fund formed for the benefit of its employees.

Concrete Sleepers

Mr. W. Robson-Brown (Esher—C.) on May 15 asked the Minister of Works if he would state the number of pre-stressed concrete sleepers produced by private firms and the number produced by Royal Ordnance factories in 1949; and the average cost in each case.

Mr. R. R. Stokes (Minister of Works) in a written answer stated: 186,110 pre-stressed concrete sleepers were produced for use by British Railways by private firms, and 285,490 by Royal Ordnance Factories in 1949. As to costs, I would refer Mr. Robson-Brown to the reply given to Mr. D. Walker-Smith (Hertford—C.) on December 12 last by the Minister of Supply.

Railway Track-Side Fires

Mr. A. C. Bossom (Maidstone—C.) on May 10 asked the Minister of Transport what provisions he was making to prevent a repetition of the track-side fires such as occurred in Kent last year due either to dumping burning ashes or from flying sparks setting fire to the long grass and weeds beside the railway lines.

Mr. Alfred Barnes (Minister of Transport) in a written answer stated: In view of the experience during the dry summer of last year, special consideration has been given to this matter by the Government departments concerned, including my own. A working party has been set up, on which the Railway Executive is represented, to revise and co-ordinate instructions and advice relating to the prevention of such fires. In the meantime all practicable steps are being taken.

British Transport Commission Education and Training

Mr. G. R. Chetwynd (Stockton-on-Tees—Lab.) on May 22 asked the Minister of Transport if he would make a statement as to the settlement of a policy of education and training with the British Transport Commission as required in Section 4 of the Transport Act, 1947.

Mr. Alfred Barnes (Minister of Transport) in a written answer stated: Section 4 (3) of the Transport Act requires that in the exercise and performance of their functions as to training and education, the Commission shall act on lines settled from time to time with my approval. After a thorough examination by a special committee of the Commission and the Executives of the facilities already available, and of the extent to which they should be widened and improved, the Commission submitted to me in April, 1949, proposals as to the lines on which they should proceed. I approved these proposals. They provide a comprehensive scheme for vocational training, background training, voluntary training and further education which I am satisfied will do much to further the efficiency of the staff of the Commission's undertakings. The scheme has the approval of the Minister of Education. The trade unions concerned have expressed their general agreement with its principles, and the Commission has announced its intention of giving the fullest opportunity through joint machinery for consultation with the staff on matters affecting it.

Railway Freight Charges and Price of Bricks

Sir Waldron Smithers (Orpington—C.) on May 22 asked the Minister of Works how much per thousand the price of bricks would be increased owing to the raising of the railway freight charges.

Mr. R. R. Stokes (Minister of Works) in a written answer stated: I cannot forecast any particular increase.

Steel Exports

Mr. F. J. Erroll (Altrincham & Sale—C.) on May 25 asked the President of the Board of Trade what was the average total monthly steel export to all countries; and what percentage of that total was to U.S.S.R. and to Canada respectively.

Mr. Harold Wilson (President of the Board of Trade): I am not quite sure what Mr. Erroll would include in the term "steel." But if he has in mind "finished steel," that is, figures taken from Groups III C and III S of the trade returns after making the appropriate exclusions, then these exports averaged 174,000 tons in January to April, 1950, of which exports to Canada represented 3·9 per cent. and to the Soviet Union 0·008 per cent.

Captain R. E. D. Ryder (Merton & Morden—C.) asked the President how it was he told the House on May 1 that Canada could not take all the steel he offered to her, whereas on April 20 he said they would have liked to have sent more steel to Canada, but the trouble was that the industry was not doing enough to meet requirements here.

Mr. Wilson: The statement on April 20 related to a period at the end of the war when we were not able to send all the steel we wanted. My statement in the debate on Anglo-Canadian trade related to what we were doing in the concluding months of 1949 and what we were in a position to do in 1950. The whole position is somewhat different compared with a year or two ago.

Excursions to Eire

Mr. David Renton (Huntingdonshire—Nat. Lib.) on May 23 asked the Chancellor of the Exchequer whether he was aware that passengers returning from Eire on round-trip excursions arranged by the British Transport Commission, were being given specially favourable treatment by the customs officials, and whether he would make a statement.

Sir Stafford Cripps (Chancellor of the Exchequer), in a written answer, stated: Mr. Renton may have been misinformed. Far from being given specially favourable treatment these excursionists are regarded as not eligible, because of their short absence from this country, for the customs concessions normally extended to returning travellers.

Houses for Victoria Railway Commissioners

Mr. W. M. T. Vane (Westmorland—C.) on May 11 asked the Minister of Health whether the two-, three- and four-bedroom timber houses now being manufactured in this country at the rate of 32 per week by arrangement with the Victorian Government for the Victoria Railway Commissioners would be satisfactory for erection in this country; and how the cost compared with the present cost in this country of building houses of similar size in brick.

Mr. Aneurin Bevan (Minister of Health): I understand that these structures were designed to meet Australian requirements. I have no information as to the cost.

Staff & Labour Matters

The N.U.R. and the Political Levy

The test case was heard in the High Court on May 22 involving a N.U.R. member who sued his union for dismissal from office because he had contracted out of the political levy. The plaintiff, a railway guard, was formerly chairman of the Woodford Halse Branch of the N.U.R.; he asked for a declaration that his removal from office was unlawful, and that the N.U.R. ruling, that he was ineligible for such office, was wrong. The grounds of the action were that the union rules did not comply with the Trade Union Act, 1913, and that it was unlawful for union funds to be applied directly or indirectly in the furtherance of any political object. The defence was a denial that his removal from office was contrary to union rules.

Disqualification was under Rule XXI, 8, which states: "A member contracting out of the political levy shall take no part in the control or management of the Political Fund of the union, and shall be ineligible to occupy any office or representative position involving any such control or management."

The Trade Union Act, 1913, established the principle that no member contracting out of the political fund shall be penalised in any way. A non-contributor could not claim the right to share in the administration of a union political fund. The political levy for the N.U.R. is ½d. per member per week. N.U.R. contributions in 1948 totalled £37,651, and the grand total was £113,268.

Judgment was given against the N.U.R. and an injunction was granted restraining it from administering the fund; but judgment will not be enforced provided the union alters its rules, or appeals.

Mr. Justice Danckwerts, in his judgment, said that as long as the constitution of the union failed to separate the control and management of the political fund from other functions of the union, there was no limit to the area of exceptions. A member exempted from the political levy might find himself excluded from practically all the activities of the union.

The N.U.R. is unlikely to appeal, but consideration is to be given to altering the rules at the N.U.R. annual conference later in the year.

N.U.R. Wage Claim

The meeting between the Chairman of the Railway Executive and N.U.R. representatives referred to in our last week's issue took place on May 26. Sir Eustace Missenden was accompanied by Mr. W. P. Allen, Member for Staff Matters of the Railway Executive, and by Mr. G. Morton, Chief Financial Officer. Mr. W. T. Potter, President, and Mr. J. B. Figgins, General Secretary, and two members of the Executive Committee, represented the N.U.R. After hearing their statement in support of a pay increase for lower-paid railwaymen, Sir Eustace stated that the matter would receive careful consideration.

New A.S.L.E.F. Claim

After refusing for some time to support the N.U.R. claim, the A.S.L.E.F., on May 30, instructed its executive committee to present a claim for wage increases to the Railway and London Transport Executives. The General Secretary, Mr. J. G. Baty, has stated that the instruction was given after consideration of "the policy of wage restraint and . . . the position of the society's members as a consequence of unrestricted profits, prices, and bonuses."

Increase in Freight Rates in Northern Ireland

The directors of the G.N.R.(I.) announcing an increase in rates for merchandise, livestock, and parcels traffic in Northern Ireland to take effect from June 19, state that the company, unlike other public transport undertakings, is dependent on its own resources, which have been so strained by the handicaps imposed on its operations in the North that expenditure on wagons, cranes, containers, and other equipment, can only be incurred if there are surplus earnings to cover it.

Rates for the carriage of livestock and parcels traffic will be increased by 20 per cent. and for merchandise and other minerals by 10 per cent. The increased charges will also apply between G.N.R.(I.) stations in Northern Ireland and (*a*) G.N.R.(I.) stations in the Republic of Ireland, (*b*) C.I.E. stations, for carriage over the G.N.R.(I.) system, and (*c*) stations on five other smaller railway companies. Passenger fares will not be increased.

An all-round increase of 20 per cent. in freight rates to take effect from June 1, was recently announced by the Ulster Transport Authority as was recorded in our issue of May 12.

Notes and News

Assistant Civil Engineer Required.—A vacancy has occurred in the East African Railways & Harbours Administration for an assistant civil engineer, over 25 years of age. See Official Notices on page 639.

Assistant Locomotive Superintendent and Foreman Required.—Wanted for Peruvian railways, an assistant locomotive superintendent and a foreman for the locomotive repair shop. See Official Notices on page 639.

Diesel Railcars for the North Western Railway (Pakistan).—Tenders are invited for the supply of ten broad-gauge (5 ft. 6 in.) diesel railcars for the North Western Railway (Pakistan). See Official Notices on page 639.

Assistant Accountant Required.—An assistant accountant, between 25 and 35 years of age, is required by the Railway Department of the Federation of Malaya for one tour of three years, with prospect of permanent and pensionable employment. See Official Notices on page 639.

Railway and Other Charges Regulations.—The Minister of Transport has made the following Statutory Instruments:—Railways (Additional Charges) (Amendment) Order, 1950 (S.I. 1950 No. 700) (price 1d.); Railways (Additional Charges) Regulations, 1950 (S.I. 1950 No. 701) (price 2d.); Harbours, Docks & Piers (Additional Charges) Regulations, 1950 (S.I. 1950 No. 702) (price 2d.); Harbours, Docks & Piers (Increase of Charges) (Revocation) Order, 1950 (S.I. 1950 No. 703) (price 1d.); Canals (Additional Charges) Regulations, 1950 (S.I. 1950 No. 704) (price 1d.). Copies may be obtained from His Majesty's Stationery Office or through any bookseller.

Wagons for Export Conveyed by Special Trains.—The London Midland Region is running from Birmingham to Liverpool special trains, loaded with railway wagons in sections and crates for shipment to South America. The consignments are part of contracts for 850 50-ton covered goods wagons being built by the Metropolitan Cammell Carriage & Wagon Co. Ltd. for the Argentine railways, and of which 200 have already been sent.

Combating Industrial Dermatitis.—Means of combating wastage of manpower caused by industrial dermatitis will be shown on the stand of Rozalex Limited at the Mechanical Handling Exhibition at Olympia. This preparation has been marketed for over 20 years. A full range of Rozalex barrier preparation will be shown on the stand.

Display of Batteries at Olympia.—The principal exhibits on the stand of the Tudor Accumulator Co. Ltd. at the Mechanical Handling Exhibition next week will be three crates of cells of the type used for locomotives and electric road vehicles and also for industrial trucks. These batteries are specially designed to withstand the stresses and strains involved in propelling a vehicle. Also shown will be a Safetylyte emergency lighting plant.

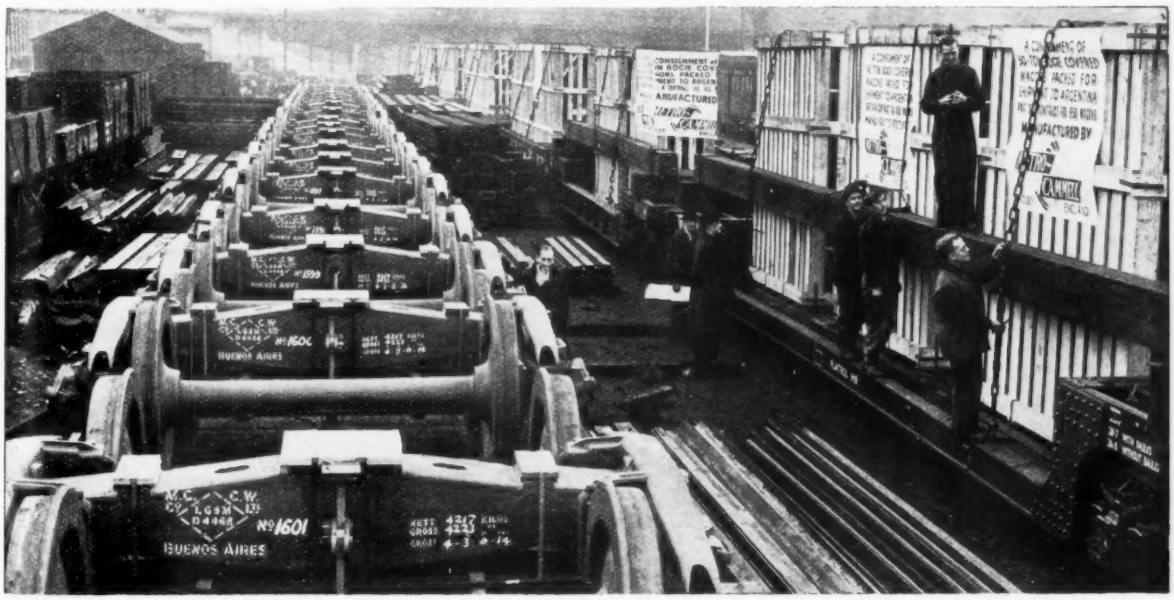
Babcock & Wilcox Mechanical Handling Gear.—Babcock & Wilcox products to be shown at the Mechanical Handling Exhibition at Olympia from June 6-17, will include a D-frame ash pump, a 3-ton level luffing and travelling jib crane model, and a working model of an ash-disposal plant associated with a modern boiler house, illustrating also Hydro-Vac dust disposal to atmospheric bunkers. Another model will show a coal, ash, and dust handling plant operating in a power station containing 300,000 lb./hr. Babcock & Wilcox pulverised-fuel fired boilers.

Ladybank-Mawcarse Line to be Closed.—As from June 5 the passenger train service is being withdrawn from the Scottish Region Ladybank-Mawcarse Junction branch line; the stations affected are Auchtermuchty, Strathmiglo, and Gateside. From that date passengers for points previously served by stations on the Ladybank-Mawcarse Junction branch line will be booked to Ladybank, or Kinross, from which places regular bus services operate in the area. Passenger train parcels and miscellaneous traffic for or from Auchtermuchty, Strathmiglo, and Gateside will be conveyed each morning by freight train, the services being supplemented by road motor services to and from Ladybank Station in the afternoon, Mondays to Fridays, inclusive. Freight train traffic will continue to be dealt with as at present.

Success of East African Railway Loan.—Application lists for the issue of the East African High Commission 3½ per cent. stock mentioned in our May 26 issue, closed five minutes after opening on May 25. Applicants for up to £2,000 stock receive full allotment; those for £2,000-£4,000 obtain £2,000; amounts over £4,000 receive about 45 per cent. The loan will be used for development of East African Railways & Harbours.

D.S.I.R.: Change of Address.—On June 1, the headquarters of the Department of Scientific & Industrial Research left Dorland House and Rex House, Regent Street, London, S.W.1, and moved to Charles House, 5-11, Regent Street, London, S.W.1. The telephone number is still Whitehall 9788. For the time being the headquarters of the Hydraulics Research Organisation and the Mechanical Engineering Research Organisation will remain at Rex House in Regent Street. The new telephone number of these organisations is Whitehall 1952.

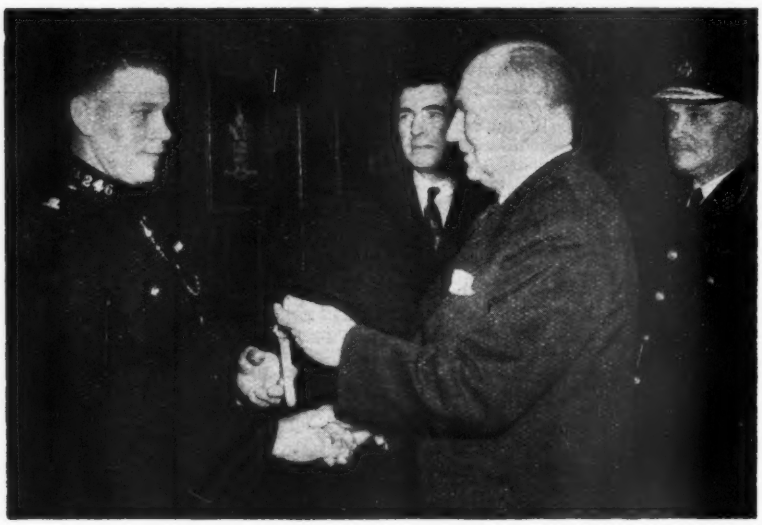
Leyland Motors Limited.—In the absence, through illness, of Mr. C. Basil Nixon, Chairman, Mr. Henry Spurrier, Managing Director, presided at the recent annual meeting of Leyland Motors Limited, whose results were given in our March 17 issue. In his statement circulated with the report and accounts, Mr. Basil Nixon said that no new business from nationalised road transport had been placed with manufacturers. There was, indeed, a tendency to seek cancellation of existing orders, and the Government was reluctant to lend money to municipalities to buy buses. Regarding taxation, diesel oil was taxed in Britain at the same rate as petrol, but in more enlightened countries diesel oil was not taxed or was taxed at a lower rate, thus encouraging its use and curtailing the



Special train being loaded with crated wagons for export to Argentina from the Birmingham works of the Metropolitan Cammell Carriage & Wagon Co. Ltd. (*see accompanying paragraph*)

demand for imported fuel. Mr. Spurrier stated that the new purchase tax on commercial vehicles did not apply to the present range of Leyland products which were above the unladen weight of three tons.

Award to British Transport Police Constable.—In July, 1949, Police Constable E. S. Mobbs, of the British Transport Police, Eastern Area, while on plain-clothes duty at Clarks Drove, King's Lynn, approached three men armed with shot-guns, who were trespassing on the railway. He was assaulted by one man, who during a struggle pointed his gun at him; the constable seized the muzzle of the gun, which went off, and eventually he overpowered his assailant. The man was subsequently convicted. For his gallantry Police Constable Mobbs has been awarded the King's Commendation for Brave Conduct. In addition, he was presented on May 10 with a gold wrist watch by General Sir Daril Watson, Member of the Railway Executive, supported by Mr. C. K. Bird, Chief Regional Officer, Eastern Region, in whose office the presentation took place, by Mr. W. B. Richards, Chief Officer (Police), Railway Executive, and by Lt.-Colonel G. J. Shepherd, Chief of Police, Eastern Area.

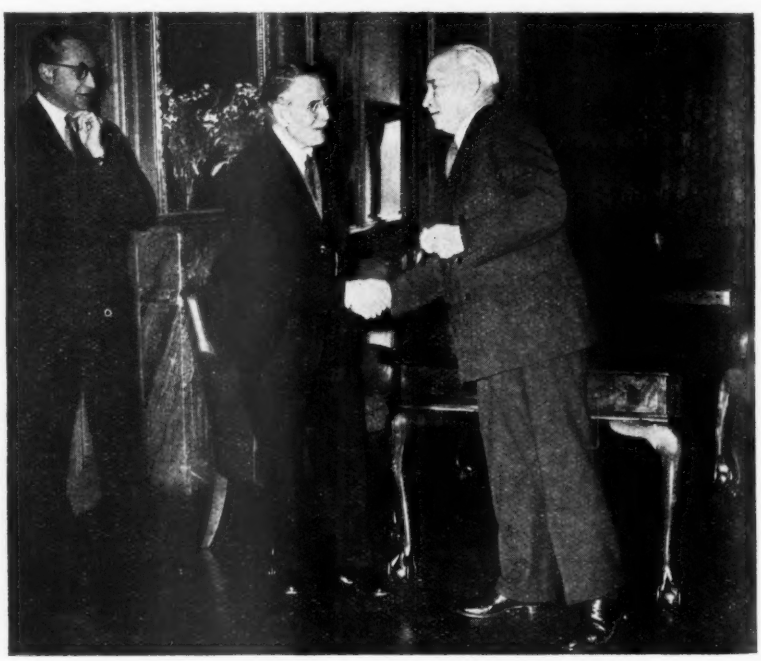


Presentation of gold watch to Police Constable E. S. Mobbs, British Transport Police: Left to right, Police Constable Mobbs, Mr. C. K. Bird, General Sir Daril Watson, and Mr. W. B. Richards (see paragraph above)

Overseas Visitors to B.I.F.—Overseas visitors to the British Industries Fair this year totalled 19,005, or nearly 2,000 more than in 1949. Home buyers, at 113,102, were about 7 per cent. less than in 1949. Buyers from the United States exceeded 1,100, and were 50 per cent. more numerous than in 1949, while buyers from the Commonwealth countries were 20 per cent. above the 1949 total.

Presentation to Institute of Transport.—Mr. C. H. Torrance, Acting High Commissioner for South Africa, received a warm welcome from the Council of the Institute of Transport when he attended their meeting last week to ask its acceptance of furniture, which was the gift of the South African Railways. Mr. Torrance was accompanied by Mr. J. R. Naisby, Commercial Representative in London of the South African Railways. The furniture comprises two tables of South African stinkwood and a set of nine chairs; the tables each bear a small plate to mark the gift, one being in Afrikaans and the other in English. Sir Osborne Mance, President of the Institute of Transport, accepted the gift on behalf of the Institute. A vote of thanks to the South African Railways and to Mr. Torrance and Mr. Naisby was moved by Sir Frederick Handley Page.

Education in Road Transport.—The fourth annual report, that for 1949, has been issued by the National Standing Joint Committee on Road Transport Education, of which Mr. R. W. Birch is Chairman. The progress is recorded of "Scheme B" for examinations, which ended its first five years in May; though the initial period of quick growth is over, decentralisation of facilities in the provinces may assist development of road transport education. Reference is made to the recommendation in the survey on education of the British Transport Commission (which was approved by the Minister of Transport) in favour of close co-operation between the Committee and the B.T.C. and its Executives concerned in education in road transport subjects.



Mr. C. H. Torrance, Acting High Commissioner for South Africa, accompanied by Mr. J. R. Naisby, Commercial Representative in London of the South African Railways, presenting a gift of furniture to Brigadier-General Sir Osborne Mance, President, Institute of Transport. The furniture is the gift of the South African Railways to the Council of the Institute (see paragraph on left)

Dunlop Group Profits.—The consolidated operating profit of the Dunlop group for 1949 was £9,480,850 as against £10,768,376 for 1948. The net profit, after tax, of the Dunlop Rubber Co. Ltd. was £2,947,390, as against £2,924,280 in 1948. A dividend of 12 per cent., with a bonus of 3 per cent., less tax, the same as last year, is recommended on the ordinary stock.

Leopoldina Scheme Sanctioned.—The High Court in London on May 8 gave sanction to the Leopoldina Railway scheme of arrangement which the judge described as very fair and reasonable. Details of the scheme were given in our April 14 issue, wherein it was stated that the scheme was opposed by ordinary stockholders (who subsequently voted in favour). The High Court sanction substantially concludes ratification on the British side of the agreement for sale to the Brazilian Government, with whom further action now lies.

Symington-Peebles Line Closed.—As from Monday, June 5, the Scottish Region Symington-Peebles branch line will be closed to passenger trains; the stations affected are Coulter, Biggar, Broughton,

OFFICIAL NOTICES

His Majesty's Colonial Service

EAST AFRICAN RAILWAYS AND HARBOURS

A VACANCY has occurred in the East African Railways and Harbours Administration for an Assistant (Civil) Engineer. The duties consist of construction and maintenance of railway and port buildings, harbour works, etc., open line maintenance and improvement, surveying and construction of new lines and harbours. Appointment will be on two years' probation for permanent pensionable employment in the scale £590 to £1,040, point of entry being determined by length of war service and experience. Free furnished quarters are provided and free passages for the officer and, if married, for his wife, on appointment and on leave. Candidates must be over 25 and preference will be given to unmarried men for first appointment; they must have passed, or possess exemption from, Sections "A" and "B" of the A.M.I.C.E. examinations and they should preferably have had some railway experience, although candidates who have had good construction experience in other engineering projects may be considered. For a form of application write, giving particulars of age, qualifications and experience, to the DIRECTOR OF RECRUITMENT (COLONIAL SERVICE), COLONIAL OFFICE, Sanctuary Buildings, Great Smith Street, London, S.W.1. Please mention this paper and quote No. 27333/2.

TENDERS are invited for the supply of ten broad gauge (5 ft. 6 in.) Diesel Rail Cars for the North Western Railway (Pakistan). Tender documents, including Instructions to Tenderers, Tender Form, Schedule of Requirements, Specification and Conditions of Contract, can be obtained from the office of the High Commissioner for Pakistan, Supply & Stores Department, 39/40, Lowndes Square, London, S.W.1, on payment of £2 10s. per set, which amount will not be refunded. Tenders will only be considered from those diesel rail car manufacturers who have built diesel rail cars of the power and size required, and which have been in service on railways and proved successful. Tenders from firms who do not fulfil these conditions will not be considered.

GLOUCESTER RAILWAY CARRIAGE & WAGON CO. LTD., Gloucester, require the services of experienced rolling-stock Draughtsmen. Five-day week. Staff pension scheme. Apply, stating age, details of experience, and salary required, to Chief Designer.

WANTED for Peruvian Railways, Assistant Locomotive Superintendent, commencing salary £1,200, and Foreman for locomotive repair shop, commencing salary £800. Colloquial knowledge of Spanish essential.—Write Box "B.J.," c/o J. W. VICKERS & Co. LTD., 7/8, Great Winchester Street, London, E.C.2.

Crown Agents for the Colonies

ASSISTANT ACCOUNTANT required by the Railway Department of the Federation of Malaya for one tour of three years, with prospect of permanent and pensionable employment. Commencing salary, including expatriation pay according to qualifications and experience, in the scale $510 a month rising to $770 a month plus cost-of-living allowance for single men $150 a month and for married men up to $310 a month. Malayan dollar equals 2s. 4d. Free passages. Liberal leave on full salary. Candidates between 25 and 35 years must have had seven years training and practical experience in the Accounts Department of a Railway and be fully conversant with Goods and Coaching Audit work. Must be familiar with preparation of Revenue and Expenditure Accounts and Returns, preparation and use of statistics, should have knowledge of mechanical acccounting systems, control and stock recording of stores as applied to Mechanical Engineering Workshops. Apply at once by letter, stating age, whether married or single, and full particulars of qualifications and experience, and mentioning this paper, to the CROWN AGENTS FOR THE COLONIES, 4, Millbank, London, S.W.1, quoting M/N/23277/3E on both letter and envelope. The Crown Agents cannot undertake to acknowledge all applications and will communicate only with applicants selected for further consideration.

Stobo, Lyne and Peebles (former L.M.S.R.). An alternative passenger train service is available at Peebles (L.N.E.R.) Station and a bus service is also available between Symington and Peebles and the places previously served by the stations on the branch line. Parcels and miscellaneous traffic for Peebles (former L.M.S.R.) and other stations on the branch, with the exception of Lyne, will be conveyed by freight train to and from Carstairs. In addition a motor vehicle will convey parcels and miscellaneous traffic between Symington and stations on the branch up to and including Stobo, returning to Symington with collected traffic in the afternoon. Lyne Station will be closed except for freight train traffic in full wagon loads, and parcels and miscellaneous traffic and sundry freight train traffic for Lyne will be dealt with at either Stobo or Peebles (L.N.E.R.), according to instructions of sender at time of booking.

Tube Investments European Agents Visit England.—Agents of Tube Investments companies from eleven European countries and Egypt last week attended a three-day conference at Birmingham to discuss sales problems in the light of changing market conditions and to consider new development projects. During their stay in England the visitors, who number about 30, will visit Tube Investments factories at Birmingham, Oldbury, Redditch, and Wednesfield, to discuss the specialised needs of their particular countries.

New System of Marking on G.N.R. (I.) Coaches.—The G.N.R. (I.) has made a new departure in indicating classes on the doors of coach compartments. One coach, recently out from the works after repainting, has the numeral "2" on each door of the eight second class compartments. Originally, the classes were printed in shaded lettering by means of transfers, and the new shaded numerals, which are also transfers, seem to follow the practice of the other railways in Ireland. The new third class coaches do not bear any indication of class.

Brush Standardisation Plans.—With the object of focussing the interest of its workpeople on the importance of further standardisation in all departments the Brush Electrical Engineering Co. Ltd. is holding an exhibition in its Loughborough works from June 5 to 9. Awards are offered for the best suggestions for an improvement in the reduction in variety of manufactured products whether raw materials or components. Brush standardisation owes much to the system initiated in Yeovil by Petters Limited as far back as 1918, and ten years ago the Brush Standardisation Committee was formed and has functioned without interruption ever since.

British Travel Centre in Paris.—To provide a "shop window" for potential French visitors, and for American and Canadian tourists in France who otherwise might by-pass Britain, the British Travel Centre established by the British Travel & Holidays Association is being opened today (Friday), in the Place Vendôme, Paris. The ceremony is being performed by the British Ambassador, Sir Oliver Harvey; also taking part will be the Lord Chancellor, Lord Jowitt, President of the Association; Mr. Hugh Gaitskell, Minister for Economic Affairs; and Sir Alexander Maxwell, Chairman of the Association, and representatives of the European Travel Commission and various national tourist organisations. Illustrated literature on Britain will be available at the centre and there will be a specially trained staff. In

Railway Civil Engineering Exhibition

Sir Eustace Missenden, Chairman of the Railway Executive, and Mr. V. A. M. Robertson, President of the Institution of Civil Engineers, and Chief Civil Engineer, Southern Region, inspecting a model of a proposed viaduct inspection gantry at the railway civil engineering exhibition at the Institution of Civil Engineers (see paragraph in our May 26 issue)

1949, 87,000 French visitors came to Britain, and more are expected during the next twelve months.

Craven Brothers (Manchester) Limited.—The profit for 1949 of Craven Brothers (Manchester) Limited was £64,946 as compared with £59,279 for the previous year. The amount of tax charged was £37,500, against £30,000, and the amount available £24,750, from which a 15 per cent. dividend is recommended.

Royal Engineers Transportation Centre.—On Friday, June 9, Lt.-General Sir Ouvry Roberts, G.O.C.-in-C., Southern Command, will inspect No. 18 Railway Group at the Transportation Centre, Royal Engineers, Longmoor Camp, Liss, Hants. No. 18 Railway Group will be in camp from June 3-17; No. 19 Railway Group, from June 17-July 1; and No. 80 Railway Workshop Regiment, and Nos. 155 and 156 Engineer Stores Squadrons, from September 9-23. The first week of each camp is devoted to military training and the second week to technical training.

G.N.R. (I.) Ex-Servicemen's Association.—A new standard for the Great Northern Railway (Ireland) Ex-Servicemen's Association was dedicated on Sunday, May 21, in Christ Church, Belfast, where Mr. W. H. Walker, District Freight Superintendent, G.N.R. (I.), Belfast, and Chairman of the Belfast Branch of the Association, is Church Warden. Detachments and colour parties from several hundred associations took part in the parade. Among those present were Captain H. A. Knott, Traffic Manager, G.N.R. (I.), and Vice-President of the Association; and Lt.-Colonel Robinson, of the Ulster Transport Authority. Mr. F. C. Mateer was in charge of the standards and the parade was under Colonel J. Stanage, of the G.N.R. (I.) Association.

Anglo Overseas Transport Co. Ltd. Jubilee.—On June 4, Anglo Overseas Transport Co. Ltd., Agents of the British Railways Continental Freight Services, will be celebrating its jubilee with a staff outing to Bournemouth. The office staff will be joined by many guests, including representatives of British and foreign railways and shipping companies, and will be conveyed to Bournemouth by a special train. Though this outing marks only the twenty-fifth anniversary of the formation of the Anglo Overseas Transport Co. Ltd., the transport enterprises which went to form the company, or were absorbed by it, date from the end of the eighteenth century. The transport section of Lavington Brothers originated about 1798, and the Anglo-French Express, another firm incorporated in Anglo Overseas Transport, originated in Eastcheap in 1896.

Forthcoming Meetings

June 2 (*Fri.*).—Scottish Society of Students of the Locomotive, at 302, Buchanan Street, Glasgow, C.2, at 7.30 p.m. "Combustion and Controlled Firing," by Mr. L. C. Wellborn.

June 3 (*Sat.*).—Railway Students' Association, London School of Economics & Political Science. Visit to Liverpool Street to Shenfield electrification.

June 6 (*Tue.*) to 17 (*Sat.*).—Mechanical Handling Exhibition, at Olympia, London.

June 10 (*Sat.*).—Permanent Way Institution, Manchester & Liverpool Section. Joint meeting with North Wales Section. Visit to Britannia Tubular Bridge.

Railway Stock Market

There has been a better trend in stock markets where the de-rationing of petrol helped sentiment by increasing hopes that further abolition and modification of controls are likely during the next few months. Gains of up to 5s. were shown in leading oil shares, partly because it is believed that there will be further negotiations with U.S.A. oil companies regarding supplies of dollar oil for the sterling area. Petrol de-rationing in Britain will mean little benefit to the profits of British oil companies; but on the other hand, it is assumed that their earnings elsewhere have prospects of expansion owing to closer co-operation between the British and U.S.A. oil groups.

Reflecting the better trend in markets, foreign rails have been slightly more active, with Leopoldina attracting buyers as a result of their recent reaction, it being pointed out that current market prices are in some cases well below expected pay-out levels, and that stockholders are likely to receive their repayment money by the autumn, if not earlier. At the time of going to press, best levels have not been held, the ordinary stock being 9⅝, after 9¾, and the preference 26¼, after 27; but the 4 per cent. and 6½ per cent. debentures were 94 and 133 respectively. Leopoldina Terminal 5 per cent. debentures eased to 88½ and the ordinary units were slightly below 1s. 9d. Great Western of Brazil receded to 143s. 9d. although it continues to be expected that the pay-out will be at least 155s. San Paulo remained active and these 10s. units have further strengthened to 17s. 3d. Assuming the company is successful in its additional compensation claims it is believed in the market that a price of 20s. should be justified. There was less activity in United of Havana stocks, the market still awaiting news of any fresh take-over developments from Cuba. The 1906 debentures were 26¼, the 4½ per cent. Central Cuban debentures changed hands at 58, the 5¼ per cent. Cuban Central debentures at around 10¼, and the 4½ per cent. Western debentures around 24½, while Havana Terminal 5 per cent. debentures marked 93.

In other directions, Taltal shares were slightly easier, business at 17s. 6d. being recorded. Nitrate Rails showed more activity around 75s. and the preferred marked 72s. 6d. Guayaquil & Quito 5 per cent. first debentures changed hands at 25, Bolivar "A" debentures at 83, Chilian Northern first mortgage debentures up to 32, while La Guaira & Caracas debentures have transferred around 82. National of Mexico prior lien 4½ per cent. bonds showed business over $27. White Pass Yukon 5 per cent. debentures marked 181 and the 6 per cent. debentures 69½. Canadian Pacifics at $29 failed to hold best levels, but the 4 per cent. preference strengthened to 68, and the 4 per cent. debentures were 96½, Manila "A" debentures were 86 and the 5 per cent. preference shares 8s. 6d. Antofagasta ordinary and preference were 7½ and 41½. Central Uruguay ordinary stock was again quoted at 10.

Freeing of petrol is not expected to have much, if any, influence on the earnings of road transport companies; and in general their shares were well maintained in price. On the other hand, any further increase in the price of petrol and oil would hit their earnings sharply, and, according to some views, the freeing of petrol may result in due course in higher petrol and oil prices. Southdown shares have remained at 117s. 6d., West Riding were 58s., Lancashire Transport 78s., and Maidstone & District marked 86s. 6d. B.E.T. deferred stock has been firmer at 440.

Iron and steel shares remained firm, the end of steel rationing, which before the end of the year may be extended to steel sheets and tinplate, being regarded as a bull point because it emphasises the efficiency and enterprise of the industry and is a further strong argument against nationalisation. It is confidently assumed that the final decision on nationalisation will be left until after the next General Election. The decision of John Summers to proceed with a public issue of debentures to help finance its big development plan was commented on favourably in the City. John Summers shares were firm at 28s. 3d., Guest Keen have risen to 42s. 7½d., Vickers were active around 29s. prior to the annual meeting and United Steel 26s. 3d., among shares of locomotive builders and engineers, Hurst Nelson were 57s., and Birmingham Wagon 28s. 6d., while Vulcan Foundry held their rise to 20s., Beyer Peacock were 21s. 3d., Gloucester Wagon 48s. 9d., North British Locomotive 17s. 9d. and Wagon Repairs 5s. shares 16s. 7½d.

Traffic Table of Overseas and Foreign Railways

	Railway	Miles open	Week ended	Traffics for week: Total this year	Traffics for week: Inc. or dec. compared with 1947/48	No. of week	Aggregate traffics to date: Total 1948/49	Aggregate traffics to date: Increase or decrease
				£	£		£	£
South & Central America	Antofagasta ...	811	14.5.50	66,560	— 220	19	1,156,444	— 126,660
	Costa Rica	281	Apr., 1950	c852,959	— c156,386	43	c8,449,421	— c1,679,807
	Dorada	70	Apr., 1950	39,295	+ 9,554	17	165,766	+ 45,455
	Inter. Ctl. Amer. ...	794	Mar., 1950	$1,310,388	+ $114,029	13	$3,778,654	+ $493,309
	La Guaira	22¼	Apr., 1950	$81,912	— $40,809	17	$345,161	— $107,313
	Nitrate	382	15.5.50	19,370	+ 769	19	178,948	+ 21,121
	Paraguay Cent. ...	274	19.5.50	£176,375	+ £71,731	46	£6,827,172	+ £2,050,589
	Peru Corp. ...	1,050	Apr., 1950	$4,263,000	— $461,658	43	$57,660,058	+ $16,899,941
	,, (Bolivian Section)	66	Apr., 1950	Bs.10,165,000	+ Bs.1,158,770	43	Bs.97,511,664	+ Bs.11,761,937
	Salvador	100	Febr., 1950	c239,000	— c72,000	35	c1,300,000	— c139,000
	Taltal	154	Apr., 1950	18,280	+ 10,365	43	138,920	+ 50,665
Canada	Canadian National†	23,473	Mar., 1950	14,955,000	+ 1,143,000	13	38,890,000	+ 341,000
	Canadian Pacific† ...	17,037	Mar., 1950	10,743,000	+ 446,000	13	27,726,000	— 793,000
Various	Barsi Light* ...	167	Mar., 1950	34,522	+ 3,022	52	358,762	+ 22,275
	Egyptian Delta ...	607	10.4.50	17,780	— 2,730	1	17,780	— 2,730
	Gold Coast... ...	536	Feb., 1950	234,159	— 6,199	48	2,547,700	+ 163,306
	Mid. of W. Australia	277	Mar., 1950	33,778	+ 3,481	39	275,873	+ 15,568
	Nigeria	1,900	Jan., 1950	502,360	+ 38,978	44	5,017,814	+ 266,573
	South Africa ...	13,347	6.5.50	1,573,895	+ 64,586	8	7,980,595	+ 438,109
	Victoria	4,744	Jan., 1950	2,000,259	+ 490,658	31	—	—

* Receipts are calculated @ 1s. 6d. to the rupee

† Calculated at $3 to £1